

**BEFORE SUBMITTING YOUR BID**

- 1. Use pen and ink to complete the Bid.**
- 2. Have you signed and completed the Contract Agreement, Offer & Award Forms?**
- 3. As a minimum, the Bidder will submit a Bid Package consisting of the Notice to Contractors, the completed Acknowledgement of Bid Amendments & Submission of Bid Bond Validation Number form, the completed Schedule of Items, 2 copies of the completed Agreement, Offer, & Award form, a Bid Bond or Bid Guarantee, and any other Certifications or Bid Requirements listed in the Bid Book.**
- 4. Have you included prices for all Bid Items? (“Zero is not considered a bid price.”)**
- 5. Have you included a bid guarantee? Acceptable forms are:**
  - A. Bid Bond on the Department’s prescribed form for 5% of the Bid Amount. (Or forms that do not contain any significant variations from the Department’s forms as solely determined by the Department.)**
  - B. Official Bank Check, Cashier’s Check, Certified Check, U.S. Postal Money Order or Negotiable Certificate of Deposit in the amount stated in the Notice to Contractors.**
- 6. If the written Bid is to be sent, Federal Express overnight delivery is suggested as the package is delivered directly to the DOT Headquarters Building in Winthrop. Other means, such as U.S. Postal Services’ Express Mail has proven not to be reliable.**

**AND FOR FEDERAL AID PROJECTS**

- 7. Have you included your DBE Utilization commitment in the proper amounts and signed the DBE Certification?**

**If you need further information regarding Bid preparation, call the DOT Contracts Section at (207)624-3430.**

**For complete specifications regarding bidding requirements, refer to Section 102 of the Maine Department of Transportation, Standard Specifications, Revision December 2002.**

# NOTICE

**The Maine Department of Transportation is attempting to improve the way Bid Amendments/Addendums are handled, and allow for an electronic downloading of bid packages from our website, while continuing to maintain a planholders list.**

**Prospective bidders, subcontractors or suppliers who wish to download a copy of the bid package and receive a courtesy notification of project specific bid amendments, must provide an email address to Diane Barnes at the MDOT Contracts mailbox at: [MDOT.contracts@maine.gov](mailto:MDOT.contracts@maine.gov). Each bid package will require a separate request. Please provide us an email address, so we can maintain the planholders list that both the industry and MDOT uses.**

**Additionally, the new Acknowledgement of Bid Amendment form will be placed in MDOT bid packages beginning with the 2/12/03 advertisements. After that date, interested parties will be responsible for reviewing and retrieving the Bid Amendments from our web site, and acknowledging receipt and incorporating those Bid Amendments in their bids.**

The downloading of bid packages from the MDOT website is not the same as providing an electronic bid to the Department. Electronic bids must be submitted via <http://www.BIDX.com>. For information on electronic bidding contact Rebecca Pooler at [rebecca.pooler@maine.gov](mailto:rebecca.pooler@maine.gov).

**STATE OF MAINE DEPARTMENT OF TRANSPORTATION**  
Bid Guaranty-Bid Bond Form

**KNOW ALL MEN BY THESE PRESENTS THAT**\_\_\_\_\_

\_\_\_\_\_, of the City/Town of \_\_\_\_\_ and State of \_\_\_\_\_

as Principal, and \_\_\_\_\_ as Surety, a

Corporation duly organized under the laws of the State of \_\_\_\_\_ and having a usual place of

Business in \_\_\_\_\_ and hereby held and firmly bound unto the Treasurer of

the State of Maine in the sum of \_\_\_\_\_ for payment which Principal and Surety bind

themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

The condition of this obligation is that the Principal has submitted to the Maine Department of

Transportation, hereafter Department, a certain bid, attached hereto and incorporated as a

part herein, to enter into a written contract for the construction of \_\_\_\_\_

\_\_\_\_\_ and if the Department shall accept said bid

and the Principal shall execute and deliver a contract in the form attached hereto (properly

completed in accordance with said bid) and shall furnish bonds for this faithful performance of

said contract, and for the payment of all persons performing labor or furnishing material in

connection therewith, and shall in all other respects perform the agreement created by the

acceptance of said bid, then this obligation shall be null and void; otherwise it shall remain in full

force, and effect.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_

WITNESS:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

WITNESS

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PRINCIPAL:

By \_\_\_\_\_

By: \_\_\_\_\_

By: \_\_\_\_\_

SURETY:

By \_\_\_\_\_

By: \_\_\_\_\_

Name of Local Agency: \_\_\_\_\_

# NOTICE

For security and other reasons, all Bid Packages which are mailed, shall be provided in double (one envelope inside the other) envelopes. The *Inner Envelope* shall have the following information provided on it:

Bid Enclosed - Do Not Open

PIN:

Town:

Date of Bid Opening:

Name of Contractor with mailing address and telephone number:

In Addition to the usual address information, the *Outer Envelope* should have written or typed on it:

Double Envelope: Bid Enclosed

PIN:

Town:

Date of Bid Opening:

Name of Contractor:

*This should not be much of a change for those of you who use Federal Express or similar services.*

Hand-carried Bids may be in one envelope as before, and should be marked with the following information:

Bid Enclosed: Do Not Open

PIN:

Town:

Name of Contractor:

# INSTRUCTIONS FOR PREPARING THE CONTRACTOR'S DISADVANTAGED BUSINESS ENTERPRISE UTILIZATION PLAN

## The Contractor Shall:

1. Submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan to the Contract's Engineer by 4:30 P.M. on the Bid day.
2. Extend equal opportunity to MDOT certified DBE firms (as listed in MDOT's DBE Directory of Certified Businesses) in the selection and utilization of Subcontractors and Suppliers.

## SPECIFIC INSTRUCTIONS FOR COMPLETING THE FORM:

Insert Contractor name, the name of the person(s) preparing the form, and that person(s) telephone and fax number.

Provide total Bid price, Federal Project Identification Number, and location of the Project work.

In the columns, name each DBE firm to be used, provide the Unit or Item cost of the Work/Product to be provided by the DBE firm, give a brief description of the Work, and the dollar value of the Work.

If no DBE firm is to be utilized, the Contractor must document the reason(s) why no DBE firms are being used. Specific supporting evidence of good faith efforts taken by Contractors to solicit DBE Bidders must be attached. This evidence, as a minimum, includes phone logs, e-mail and/or mail DBE solicitation records, and the documented results of these solicitations.

# NOTICE

The Department has revised the Disadvantaged Business Enterprise Proposed Utilization form and the procedure that has been used for the past several months for Contractors to submit the form.

The Apparent Low Bidder now must submit the form by close of Business (4:30 P.M.) on Bid day.

The new Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan form contains additional information that is required by USDOT.

The Disadvantaged Business Enterprise Proposed Utilization Plan form will no longer be used. The new Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan form must be used.

A copy of the new Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan and instructions for completing it are attached.

Note: Questions about DBE firms, or to obtain a printed copy of the DBE Directory, contact Equal Opportunity at (207) 624-3066.

MDOTs DBE Directory of Certified firms can also be obtained at [http://www.state.me.us/mdot/humnres/o\\_equalo/cdwbed\\_h.htm](http://www.state.me.us/mdot/humnres/o_equalo/cdwbed_h.htm)

# NOTICE

Bidders:

Please use the attached “Request for Information” form when faxing questions and comments concerning specific Contracts that have been Advertised for Bid. Include additional numbered pages as required.

# REQUEST FOR INFORMATION

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

[illegible]

Response By:\_\_\_\_\_ Date:\_\_\_\_\_



# CONTRACTOR'S DISADVANTAGED BUSINESS ENTERPRISE PROPOSED UTILIZATION PLAN

Low Bidder shall furnish completed form to Contracts Section by 4:30 P.M. on Bid Opening day.

TO: MDOT Contracts Section  
16 State House Station,  
Augusta, Me 04333-0016  
or  
Fax: 207-624-3431

Contractor: \_\_\_\_\_

Prepared by: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

BID PRICE: \$ \_\_\_\_\_ FEDERAL PROJECT # \_\_\_\_\_ LOCATION: \_\_\_\_\_

TOTAL DBE PARTICIPATION AS A PERCENT OF TOTAL BID PRICE = \_\_\_\_\_ %

DBE Firm*	Unit/Item Cost	Unit #	Description of work & Item Number	Actual \$ Value
Total >				

If no DBE firm(s) are used, bidder must document efforts made to secure DBE participation and attach supporting evidence of this effort:

\_\_\_\_\_  
\_\_\_\_\_.

Examples: Bidder relies wholly upon low quote subcontractor section, DBE firm(s) were not low quote.  
No DBE firms bid.

\*Only DBE firms certified by MDOT prior to bidding can be utilized by Contractor for DBE credit.  
Directory of certified DBEs is available on MDOT's website: [www.state.me.us/mdot](http://www.state.me.us/mdot)

Equal Opportunity Use:

Plan received \_\_\_\_/\_\_\_\_/\_\_\_\_ Verified by: \_\_\_\_\_ Action: \_\_\_\_\_



## Office of Human Resources

### Equal Opportunity

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## MAINE DEPARTMENT OF TRANSPORTATION

Certified Disadvantaged and Women Business Enterprise

DBE DIRECTORY - MINORITY OWNED

WBE DIRECTORY - WOMEN OWNED

WEBSITE FOR DIRECTORY CAN BE FOUND AT:

[http://www.state.me.us/mdot/humnres/o\\_equalo/cdwbed\\_h.htm](http://www.state.me.us/mdot/humnres/o_equalo/cdwbed_h.htm)

*It is the responsibility of the Contractor to access the DBE Directory at this site in order to have the most current listings.*

## STATE OF MAINE DEPARTMENT OF TRANSPORTATION NOTICE TO CONTRACTORS

Sealed Bids addressed to the Maine Department of Transportation, Augusta, Maine 04333 and endorsed on the wrapper "Bids for Intersection Improvements in the city of **Portland**" will be received from contractors at the Reception Desk, Maine DOT Building, Child Street, Augusta, Maine, until 11:00 o'clock A.M. (prevailing time) on October 8, 2003, and at that time and place publicly opened and read. Bids will be accepted from contractors prequalified by the Department of Transportation for Highway Construction projects. All other Bids may be rejected. **MDOT provides the option of electronic bidding. We accept electronic bids for those bid packages posted on the bidx.com website. Electronic bids do not have to be accompanied by paper bids. Please note: the Department will accept a facsimile of the bid bond; however, the original bid bond must then be received at the MDOT Contract Section within 72 hours of the bid opening.** Until further notice, dual bids (one paper, one electronic) will be accepted, with the paper copy taking precedence.

Description: Maine Federal Aid Project No. STP-7541(00)X, PIN. 7541.00

Location: In Cumberland County, project is located at the intersection of Allen Ave. with Washington St.

Outline of Work: Grinding pavement, hot mix asphalt, aggregate subbase, curb, drainage, traffic signals, pavement markings, and other incidental work.

The basis of award will be the total for Section 0001 of the Schedule of Items

For general information regarding Bidding and Contracting procedures, contact Bruce Carter at (207)624-3430. Our webpage at <http://www.state.me.us/mdot/project/design/homepg.htm> contains a copy of the schedule of items, Plan Holders List, written portions of bid amendments (not drawings), and bid results. For Project-specific information fax all questions to **Project Manager Jim Mansir** at (207)624-3621. Questions received after 12:00 noon of Monday prior to bid date will not be answered. Bidders shall not contact any other Departmental staff for clarification of Contract provisions, and the Department will not be responsible for any interpretations so obtained. Hearing impaired persons may call the Telecommunication Device for the Deaf at (207)287-3392.

Plans, specifications and bid forms may be seen at the Maine DOT Building in Augusta, Maine and at the Department of Transportation's Division 6I Office in Scarborough. They may be purchased from the Department between the hours of 8:00 a.m. to 4:30 p.m. by cash, credit card (Visa/Mastercard) or check payable to Treasurer, State of Maine sent to Maine Department of Transportation, Attn.: Mailroom, 16 State House Station, Augusta, Maine 04333-0016. They also may be purchased by telephone at (207)624-3536 between the hours of 8:00 a.m. to 4:30 p.m. Full size plans \$32.00 (\$37.00 by mail). Half size plans \$16.00 (\$20.00 by mail), Bid Book \$10 (\$13 by mail), Single Sheets \$2, payment in advance, all non-refundable.

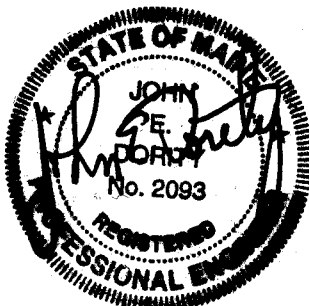
Each Bid must be made upon blank forms provided by the Department and must be accompanied by a bid bond at 5% of the bid amount or an official bank check, cashier's check, certified check, certificate of deposit, or United States postal money order in the amount of \$12,000.00 payable to Treasurer, State of Maine as a Bid guarantee. A Contract Performance Surety Bond and a Contract Payment Surety Bond, each in the amount of 100 percent of the Contract price, will be required of the successful Bidder.

This Contract is subject to all applicable Federal Laws. This contract is subject to compliance with the Disadvantaged Business Enterprise program requirements as set forth by the Maine Department of Transportation.

All work shall be governed by "State of Maine, Department of Transportation, Standard Specifications, Revision of December 2002", price \$10 [\$13 by mail], and Standard Details, Revision of December 2002, price \$20 [\$25 by mail] Standard Detail updates can be found at <http://www.state.me.us/mdot/project/design/homepg.htm>

The right is hereby reserved to the MDOT to reject any or all Bids.

Augusta, Maine  
September 17, 2003



JOHN E. DORITY  
CHIEF ENGINEER

**SPECIAL PROVISION 102.7.3**  
**ACKNOWLEDGMENT OF BID AMENDMENTS**  
**&**  
**SUBMISSION OF BID BOND VALIDATION NUMBER (IF APPLICABLE)**

With this form, the Bidder acknowledges its responsibility to check for all Amendments to the Bid Package. For each Project under Advertisement, Amendments are located at <http://www.state.me.us/mdot/project/design/schedule.htm>. It is the responsibility of the Bidder to determine if there are Amendments to the Project, to download them, and to incorporate them into their Bid Package. The Maine DOT will not post Bid Amendments any later than noon the day before Bid opening.

Amendment Number	Date

The Contractor, for itself, its successors and assigns, hereby acknowledges that it has received all of the above referenced Amendments to the Bid Package. Failure to acknowledge receipt of all Amendments to the Bid Package will be considered a Non-curable Bid Defect in accordance with Section 102.11.1 of the Standard Specifications, Revision of December 2002.

CONTRACTOR

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of authorized representative

\_\_\_\_\_  
(Name and Title Printed)

**Bid Bond Validation Number** \_\_\_\_\_  
**(Applicable to annual bid bonds or electronic bid bonds.)**

MAINE DEPARTMENT OF TRANSPORTATION

BID

DATE OF OPENING :

CALL ORDER :

CONTRACT ID : 007541.00

PROJECTS

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STP-7541(00)X

COUNTY : CUMBERLAND

## SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 007541.00

PROJECT(S): STP-7541(00)X

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
SECTION 0001 HIGHWAY ITEMS				
0010	202.202 REMOVING PAVEMENT SURFACE 150 mm depth	M2 1250.000		
0020	202.202 REMOVING PAVEMENT SURFACE 40 mm depth	M2 6050.000		
0030	203.20 COMMON EXCAVATION	M3 900.000		
0040	206.061 STRUCTURAL EARTH EXCAVATION - DRAINAGE AND MINOR STRUCTURES, BELOW GRADE	M3 20.000		
0050	304.10 AGGREGATE SUBBASE COURSE - GRAVEL	M3 480.000		
0060	403.1021 TEXTURED ASPHALT PAVEMENT	M2 164.000		
0070	403.207 HOT MIX ASPHALT 19.0 MM NOMINAL MAX SIZE	MG 333.000		
0080	403.208 HOT MIX ASPHALT 12.5 MM, SURFACE	MG 910.000		
0090	403.209 HOT MIX ASPHALT 9.5 MM(SIDEWALKS,DRIVES, INCIDENTAL )	MG 55.000		
0100	604.072 CATCH BASIN TYPE A1-C	EA 1.000		

## SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 007541.00

PROJECT(S): STP-7541(00)X

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0110	604.18 ADJUSTING MANHOLE OR CATCH BASIN TO GRADE	3.000 EA				
0120	605.11 300 MM UNDERDRAIN TYPE C	40.000 M				
0130	607.24 REMOVE AND RESET FENCE	6.000 M				
0140	607.291 REMOVE AND RESET STONE WALL	6.000 M				
0150	609.11 VERTICAL CURB TYPE 1	37.000 M				
0160	609.12 VERTICAL CURB TYPE 1 - CIRCULAR	16.000 M				
0170	609.19 VERTICAL CURB TYPE 2	55.000 M				
0180	609.237 TERMINAL CURB TYPE 1 - 2.1 METER	29.000 EA				
0190	609.35 CURB TYPE 5 - CIRCULAR	1.000 M				
0200	609.38 RESET CURB TYPE 1	174.000 M				
0210	609.39 RESET CURB TYPE 2	53.000 M				

## SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 007541.00

PROJECT(S) : STP-7541(00)X

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0220	609.40 RESET CURB TYPE 5	7.000				
	M					
0230	615.07 LOAM	4.000				
	M3					
0240	618.1301 SEEDING METHOD NUMBER 1 - PLAN QUANTITY	1.000				
	UN					
0250	619.1301 BARK MULCH - PLAN QUANTITY	0.800				
	UN					
0260	626.22 NON-METALLIC CONDUIT	140.000				
	M					
0270	626.31 450 MM FOUNDATION	3.000				
	EA					
0280	626.33 750 MM FOUNDATION	2.000				
	EA					
0290	626.331 900 MM FOUNDATION	2.000				
	EA					
0300	626.35 CONTROLLER CABINET FOUNDATION	1.000				
	EA					
0310	627.18 300 MM SOLID WHITE PAVEMENT MARK LINE	43.000				
	M					
0320	627.711 WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE (PLAN QUANTITY )	2100.000				
	M					



## SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 007541.00

PROJECT(S) : STP-7541(00)X

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0330	627.75 WHITE OR YELLOW PAVEMENT AND CURB MARKING	140.000 M2				
0340	627.76 TEMPORARY PAVEMENT MARKING LINE, WHITE OR YELLOW	LUMP	LUMP			
0350	629.05 HAND LABOR, STRAIGHT TIME	40.000 HR				
0360	631.10 AIR COMPRESSOR (INCLUDING OPERATOR)	15.000 HR				
0370	631.11 AIR TOOL (INCLUDING OPERATOR)	15.000 HR				
0380	631.12 ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	15.000 HR				
0390	631.13 BULLDOZER (INCLUDING OPERATOR)	10.000 HR				
0400	631.171 TRUCK - SMALL (INCLUDING OPERATOR)	10.000 HR				
0410	631.21 ROAD BROOM (INCLUDING OPERATORS AND HAULER)	10.000 HR				
0420	631.22 FRONT END LOADER (INCLUDING OPERATOR)	10.000 HR				
0430	639.18 FIELD OFFICE TYPE A	1.000 EA				

## SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 007541.00

PROJECT(S): STP-7541(00)X

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0440	643.80 TRAFFIC SIGNALS AT washington & allen	LUMP	LUMP			
0450	643.83 VIDEO DETECTION SYSTEM	1.000 EA				
0460	643.91 MAST ARM POLE	4.000 EA				
0470	643.92 PEDESTAL POLE	3.000 EA				
0480	652.31 TYPE I BARRICADE	35.000 EA				
0490	652.311 TYPE II BARRICADE	20.000 EA				
0500	652.33 DRUM	50.000 EA				
0510	652.34 CONE	65.000 EA				
0520	652.35 CONSTRUCTION SIGNS	40.000 M2				
0530	652.361 MAINTENANCE OF TRAFFIC CONTROL DEVICES	LUMP	LUMP			
0540	652.38 FLAGGER	1800.000 HR				

## SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 007541.00

PROJECT(S): STP-7541(00)X

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0550	652.381 UNIFORM TRAFFIC OFFICERS	100.000 HR				
0560	656.75 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LUMP	LUMP			
0570	659.10 MOBILIZATION	LUMP	LUMP			
SECTION 0001 TOTAL						

## SECTION 0002 HIGHWAY ITEMS - NON-PART.

0580	603.159 300 MM CULVERT PIPE OPTION III	42.000 M				
0590	603.169 375 MM CULVERT PIPE OPTION III	30.000 M				
0600	603.179 450 MM CULVERT PIPE OPTION III	6.000 M				
0610	604.15 MANHOLE	8.000 EA				
0620	604.161 ALTERING CATCH BASIN	10.000 EA				
0630	604.072 CATCH BASIN TYPE A1-C	4.000 EA				

## SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 007541.00

PROJECT(S): STP-7541(00)X

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0640	605.12 375 MM UNDERDRAIN TYPE C	385.000 M				
0650	605.13 450 MM UNDERDRAIN TYPE C	260.000 M				
	SECTION 0002 TOTAL					
	TOTAL BID					

## **CONTRACT AGREEMENT, OFFER & AWARD**

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at 1705 U.S. Route 202, Winthrop, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and (Name of the firm bidding the job) a corporation or other legal entity organized under the laws of the State of Maine, with its principal place of business located at (address of the firm bidding the job)

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

### **A. The Work.**

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, PIN No. 1224.00

for the Hot Mix Asphalt Overlay in the town/city of West Eastport, County of Washington, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

### **B. Time.**

The Contractor agrees to complete all Work, except warranty work, on or before November 15, 2003. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002.

**C. Price.**

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is       (Place bid here in alphabetical form such as One Hundred and Two dollars and 10 cents)        
\$ (repeat bid here in numerical terms, such as \$102.10) Performance Bond and Payment Bond each being 100% of the amount of this Contract.

**D. Contract.**

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

**E. Certifications.**

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.
2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

**F. Offer.**

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

**PIN 1234.00 West Eastport, Hot Mix Asphalt Overlay**

State of Maine, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, Revision of December 2002, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work on the date specified in the Engineer's "Notice to Commence Work" as stated in Section 107.2 of the Standard Specifications Revision of 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan by 4:30pm on the day of bid opening to the Contracts Engineer.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Witness Sign Here)  
Witness

CONTRACTOR  
(Sign Here)  
\_\_\_\_\_  
(Signature of Legally Authorized Representative  
of the Contractor)

\_\_\_\_\_  
(Print Name Here)  
(Name and Title Printed)

**G. Award.**

Your offer is hereby accepted.  
documents referenced herein.

This award consummates the Contract, and the

MAINE DEPARTMENT OF TRANSPORTATION

\_\_\_\_\_  
Date

\_\_\_\_\_  
By: David A. Cole, Commissioner

\_\_\_\_\_  
(Witness)



## **CONTRACT AGREEMENT, OFFER & AWARD**

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and

\_\_\_\_\_ a corporation or other legal entity organized under the laws of the State of Maine, with its principal place of business located at \_\_\_\_\_

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

### **A. The Work.**

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, PIN No. **7541.00** for **Intersection Improvements** in the city of **Portland**, County of **Cumberland** Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

### **B. Time.**

The Contractor agrees to complete all Work, except warranty work, on or before **June 30, 2004**. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002.

### **C. Price.**

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is

**Section 0001 \$** \_\_\_\_\_

**Section 0002 \$** \_\_\_\_\_

Performance Bond and Payment Bond each being 100% of the amount awarded under this Contract (see award amount in Section G below).

**D. Contract.**

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

**E. Certifications.**

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.
2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

**F. Offer.**

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

**PIN. 7541.00 - Intersection Improvements - in the city of Portland,**

State of Maine, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, Revision of December 2002, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work on the date specified in the Engineer's "Notice to Commence Work" as stated in Section 107.2 of the Standard Specifications Revision of December 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan by 4:30pm on the day of bid opening to the Contracts Engineer.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Signature of Legally Authorized Representative  
of the Contractor)

\_\_\_\_\_  
Witness

\_\_\_\_\_  
(Name and Title Printed)

**G. Award.**

Your offer is hereby accepted for (see checked boxes):

Section 0001 ☐

Section 0002 ☐

**Contract Amount:** \_\_\_\_\_

This award consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

\_\_\_\_\_  
Date

\_\_\_\_\_  
By: David A. Cole, Commissioner

\_\_\_\_\_  
Witness

## **CONTRACT AGREEMENT, OFFER & AWARD**

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and

\_\_\_\_\_ a corporation or other legal entity organized under the laws of the State of Maine, with its principal place of business located at \_\_\_\_\_

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

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The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

### **B. Time.**

The Contractor agrees to complete all Work, except warranty work, on or before **June 30, 2004**. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002.

### **C. Price.**

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is

**Section 0001 \$** \_\_\_\_\_

**Section 0002 \$** \_\_\_\_\_

Performance Bond and Payment Bond each being 100% of the amount awarded under this Contract (see award amount in Section G below).

**D. Contract.**

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

**E. Certifications.**

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.
2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

**F. Offer.**

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

**PIN. 7541.00 - Intersection Improvements - in the city of Portland,**

State of Maine, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, Revision of December 2002, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work on the date specified in the Engineer's "Notice to Commence Work" as stated in Section 107.2 of the Standard Specifications Revision of December 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan by 4:30pm on the day of bid opening to the Contracts Engineer.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Signature of Legally Authorized Representative  
of the Contractor)

\_\_\_\_\_  
Witness

\_\_\_\_\_  
(Name and Title Printed)

**G. Award.**

Your offer is hereby accepted for (see checked boxes):

Section 0001 ☐

Section 0002 ☐

**Contract Amount:** \_\_\_\_\_

This award consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

\_\_\_\_\_  
Date

\_\_\_\_\_  
By: David A. Cole, Commissioner

\_\_\_\_\_  
Witness



BOND # \_\_\_\_\_

CONTRACT PERFORMANCE BOND  
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That \_\_\_\_\_  
\_\_\_\_\_ **and the State of** \_\_\_\_\_, as principal,  
and \_\_\_\_\_,  
a corporation duly organized under the laws of the State of \_\_\_\_\_ and having a  
usual place of business \_\_\_\_\_,  
as Surety, are held and firmly bound unto the Treasurer of the State of Maine in the sum  
of \_\_\_\_\_ **and 00/100 Dollars (\$** \_\_\_\_\_ **)**,  
to be paid said Treasurer of the State of Maine or his successors in office, for which  
payment well and truly to be made, Principal and Surety bind themselves, their heirs,  
executors and administrators, successors and assigns, jointly and severally by these  
presents.

The condition of this obligation is such that if the Principal designated as Contractor in  
the Contract to construct Project Number \_\_\_\_\_ in the Municipality of  
\_\_\_\_\_ promptly and faithfully performs the Contract, then this  
obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the State  
of Maine.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20....

WITNESSES:

Signature.....  
Print Name Legibly .....

Signature .....

Print Name Legibly .....

SURETY ADDRESS:  
.....  
.....

TELEPHONE.....

SIGNATURES:

CONTRACTOR:

Print Name Legibly .....  
SURETY:

Print Name Legibly .....

NAME OF LOCAL AGENCY:

ADDRESS .....  
.....

.....

BOND # \_\_\_\_\_

CONTRACT PAYMENT BOND  
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That \_\_\_\_\_  
\_\_\_\_\_ **and the State of** \_\_\_\_\_, as principal,  
and \_\_\_\_\_  
a corporation duly organized under the laws of the State of \_\_\_\_\_ and having a  
usual place of business in \_\_\_\_\_,  
as Surety, are held and firmly bound unto the Treasurer of the State of Maine for the use  
and benefit of claimants as herein below defined, in the sum of  
\_\_\_\_\_ **and 00/100 Dollars (\$** \_\_\_\_\_ **)**  
for the payment whereof Principal and Surety bind themselves, their heirs, executors and  
administrators, successors and assigns, jointly and severally by these presents.

The condition of this obligation is such that if the Principal designated as Contractor in  
the Contract to construct Project Number \_\_\_\_\_ in the Municipality of  
\_\_\_\_\_ promptly satisfies all claims and demands incurred for all  
labor and material, used or required by him in connection with the work contemplated by  
said Contract, and fully reimburses the obligee for all outlay and expense which the  
obligee may incur in making good any default of said Principal, then this obligation shall  
be null and void; otherwise it shall remain in full force and effect.

A claimant is defined as one having a direct contract with the Principal or with a  
Subcontractor of the Principal for labor, material or both, used or reasonably required for  
use in the performance of the contract.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20 .. .

WITNESS:

SIGNATURES:

CONTRACTOR:

Signature.....

Print Name Legibly .....

SURETY:

Signature.....

Print Name Legibly .....

SURETY ADDRESS:

NAME OF LOCAL AGENCY:

ADDRESS .....

TELEPHONE .....

GENERAL DECISION ME030003 06/13/03 ME3  
General Decision Number ME030003

Superseded General Decision No. ME020003

State: Maine

Construction Type:  
HIGHWAY

County(ies):  
ANDROSCOGGIN CUMBERLAND

Highway Construction Projects Excluding Major Bridging  
(for example: bascule, suspension and spandrel arch  
bridges; those bridging waters presently navigating or  
to be navigable; and those involving marine construction  
in any degree); tunnels, building structures in rest area  
projects and railroad construction.

Modification Number      Publication Date  
0                              06/13/2003

COUNTY(ies):  
ANDROSCOGGIN CUMBERLAND

SUME4025A 10/24/2000

	Rates	Fringes
CARPENTERS	11.30	1.95
ELECTRICIANS	17.90	2.30
LABORERS		
Flaggers	6.00	
Landscape	7.99	.72
Unskilled	8.69	1.08
POWER EQUIPMENT OPERATORS		
Backhoes	12.39	2.00
Bulldozers	11.13	1.94
Excavators	11.24	1.31
Loaders	11.19	1.82
Rollers	10.16	1.56
TRUCK DRIVERS		
Dump	9.02	1.39
Two axle	9.08	1.28

WELDERS - Receive rate prescribed for craft performing operation  
to which welding is incidental.

Unlisted classifications needed for work not included within  
the scope of the classifications listed may be added after  
award only as provided in the labor standards contract clauses  
(29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates  
listed under that identifier do not reflect collectively

bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U. S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U. S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

SPECIAL PROVISION  
CONSTRUCTION AREA

A Construction Area located in the **City of Portland** has been established by the Maine Department of Transportation in accordance with provisions of Title 29, Section 1703, Maine Revised Statutes Annotated.

- (a) The section of highway under construction beginning at Sta. 10+081 and ending at Sta. 10+386 (Wash. Ave) beginning at Sta. 19+910 and ending at Sta. 20+122 (Allen Ave.) of the construction centerline plus approaches.
- (b) The section of highway under construction beginning at Sta. 10+081 and ending at Sta. 10+386 (Wash. Ave.) beginning at Sta. 19+910 and ending at Sta. 20+122 (Allen Ave.) of the new construction centerline plus approaches.

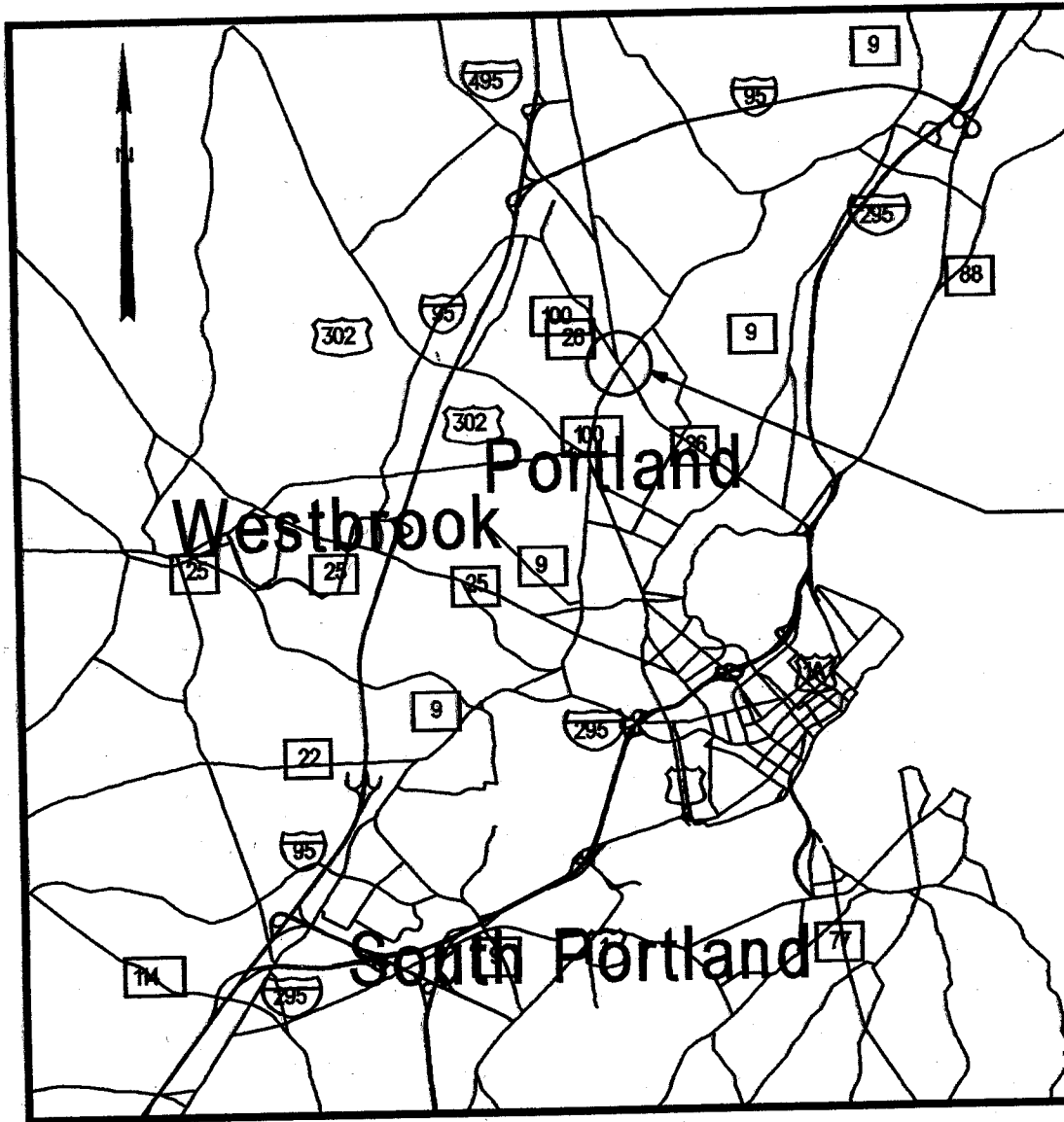
The State Department of Transportation or the State's Engineer may issue permits for stated periods of time for moving construction equipment without loads, low-bed trailers with overloads, over-height, over-width or over-length equipment or materials over all State maintained sections described in the "Construction Area" above and in addition may issue permits for stated periods of time for moving overweight vehicles and loads over the section described in (a) above. The right to revoke such a permit at any time is reserved by the State Department of Transportation and the issuance of such permits shall be subject to any Special Provisions or Supplemental Specifications written for this project.

A Temporary Permit for each move may be issued by the State Department of Transportation or the State's Engineer for moving Contractor's construction equipment used on the project which exceeds the legal limits (shovels, bulldozers, etc.) to sources of construction material over highways maintained by the State reasonably within the area of the project.

The Municipal Officers for the **City of Portland** agreed that a permit will be issued to the Contractor for the purpose of hauling loads in excess of the limits as specified in Title 29, Maine Revised Statutes Annotated, on the town ways as described in the "Construction Area" and that single move permits will be issued for moving Contractor's construction equipment used on the project which exceeds the legal limits (shovels, bulldozers, etc.) to sources of construction material over town ways reasonably within the area of the project.

In the event it is necessary to transport gravel, borrow, or other construction material in legally registered vehicles carrying legal loads over town ways, a Contractor's Bond of not more than Nine Thousand (\$9,000.00) per kilometer of traveled length may be required by the town, the exact amount of said bond to be determined prior to use of any town way.

The maximum speed limits for trucks on any town way will be forty (40) km per hour [25 mph], unless a higher legal limit is specifically agreed upon in writing by the Municipal Officers concerned.



A PORTION OF CUMBERLAND COUNTY

LOCATION MAP



Scale in Kilometers

SPECIAL PROVISION  
CONSTRUCTION AREA

Title 29A, M.R.S.A., Subsection 2383. Overlimit movement permits

1. Overlimit movement permits issued by State. The Secretary of State, acting under guidelines and advice of the Commissioner of Transportation, may grant permits to move non-divisible objects having a length, width, height or weight greater than specified in this Title over a way or bridge maintained by the Department of Transportation.
2. Permit Fee. The Secretary of State, with the advice of the Commissioner of Transportation, may set the fee for these permits, at not less than \$3, nor more than \$15, based on weight, height, length and width.
3. County and municipal permits. A permit may be granted, for a reasonable fee, by county commissioners or municipal officers for travel over a way or bridge maintained by that county or municipality.
4. Permits for weight. A vehicle granted a permit for excess weight must first be registered for the maximum gross vehicle weight allowed for that vehicle.
5. Special mobile equipment. The Secretary of State may grant a permit, for no more than one year, to move pneumatic-tire equipment under its own power, including Class A and Class B special mobile equipment, over ways and bridges maintained by the Department of Transportation. The fee for that permit is \$15 for each 30-day period.
6. Scope of permit. A permit is limited to the particular vehicle or object to be moved and particular ways and bridges.
7. Construction permits. A permit for a stated period of time may be issued for loads and equipment employed on public way construction projects, United States Government projects or construction of private ways, when within construction areas established by the Department of Transportation. The Permit:
  - A. Must be procured from the municipal officers for a construction area within that municipality;
  - B. May require the Contractor to be responsible for damage to ways used in the construction areas and may provide for:
    - (1) Withholding by the agency of the work of final payment under contract; or
    - (2) The furnishing of a bond by the Contractor to guarantee suitable repair or payment of damages.
  - C. May be granted by the Department of Transportation or by the state engineer in charge of the construction contract; and
  - D. For construction areas, carries no fee and does not come within the scope of this section.
8. Gross vehicle weight permits. The following may grant permits to operate a vehicle having a gross vehicle weight exceeding the prescribed limit:



- A. The Secretary of State, with the consent of the Department of Transportation, for state and state aid highways and bridges within city or compact village limits;
  - B. Municipal officers, for all other ways and bridges within that city and compact village limits; and
  - C. The county commissioners, for county roads and bridges located in unorganized territory.
9. Pilot vehicles and state police escorts. Pilot vehicles required by a permit must be equipped with warning lights and signs as required by the Secretary of State with the advice of the Department of Transportation.

Warning lights may only be operated and lettering on the signs may only be visible on a pilot vehicle while it is escorting on a public way a vehicle with a permit.

The Secretary of State shall require a State Police escort for a single vehicle or a combination of vehicles of 125 feet or more in length or 16 feet or more in width. The Secretary of State, with the advice of the Commissioner of Transportation, may require vehicles of lesser dimensions to be escorted by the State Police.

The Bureau of State Police shall establish a fee for State Police escorts.

All fees collected must be used to defray the cost of services provided.

With the advice of the Commissioner of Transportation and the Chief of the State Police, the Secretary of State shall establish rules for the operation for the operation of pilot vehicles.

10. Taxes paid. A permit for a mobile home may not be granted unless the applicant provides reasonable assurance that all property taxes, sewage disposal charges and drain and sewer assessments applicable to the mobile home, including those for the current tax year, have been paid or that the mobile home is exempt from those taxes.

1993, c. 683, § S-2, eff. January 1, 1995.

### Historical and Statutory Notes

#### Derivation:

R.S. 1954, c. 22 § 98  
Laws 1955, c. 389  
Laws 1967, c. 3.  
Laws 1971, c. 593, § 22.  
Laws 1973, c. 213.  
Laws 1975, c. 130, §  
Laws 1975, c. 319, § 2

Laws 1977, c. 73, § 5.  
Laws 1981, c. 413.  
Laws 1985, c. 225, § 1  
Laws 1987, c. 52.  
Laws 1987, 781, § 3.  
Laws 1989, c. 866, § B-13.  
Laws 1991, c. 388, § 8.  
Laws 1993, c. 683, § A-1.  
Former 29 M.R.S.A. § 2382.

#### Cross Reference

Collection by Secretary of State, See 29-A  
M.R.S.A. § 154.

**SPECIAL PROVISIONS**  
**SECTION 104**  
**Utilities**

**MEETING**

A Preconstruction Utility Conference, as defined in Subsection 104.4.6 of the Standard Specifications is required.

**GENERAL INFORMATION**

These Special Provisions outline the arrangements that have been made by the Department for utility and/or railroad work to be undertaken in conjunction with this project. The following list identifies all known utilities or railroads having facilities presently located within the limits of this project or intending to install facilities during project construction

**Overview:**

<b>Utility/Railroad</b>	<b>Aerial</b>	<b>Underground</b>	<b>Contact</b>
Central Maine Power	X	X	Gary Hawkes 828-2832 Thompson Atwood 791-1022
City of Portland: Public Works, Traffic	X	X	Anthony Lombardo 874-8801 Public Works Larry Ash 874-8801 Traffic
City of Portland - Fire	X	X	Ben Diaz 874-8489
MCI	X		Rick Epperson 603-263-1065 Stephen Parretti 508-892-3381
Northern Utilities		X	Brad Buzzell 252-0907
Portland Water District		X	Dave Coffin 774-5961
Time Warner Cable	X		Don Johnson 253-2291
Verizon	X	X	Tim Layton 797-1765

Temporary utility adjustments are **{not}** anticipated.

Unless otherwise specified, any underground utility facilities shown on the project plans represent approximate locations gathered from available information. The Department cannot certify the level of accuracy of this data. Underground facilities indicated on the topographic sheets (plan views) have been collected from historical records and/or on-site designations provided by the respective utility companies. Underground facilities indicated on the cross-sections have been carried over from the plan view data and may also include further approximations of the elevations (depths) based upon straight-line interpolation from the nearest manholes, gate valves, or test pits.

All adjustments are to be made by the respective utility/railroad unless otherwise specified herein.

All clearing and tree removal in areas where utilities are involved must be completed before the utilities are able to relocate their facilities.

Fire hydrants shall not be disturbed until all necessary work has been accomplished to provide proper fire protection.

The approximate locations of major items of existing and proposed (permanent and temporary) utility plant are shown on the highway construction plans.

All utility crossings over highways will provide not less than 20 feet vertical clearance over existing ground in cut or over finished grade in fill, during construction of this project. Clearance over traffic signal mast arms shall be a minimum of 3 feet.

Manholes, valve boxes, service connections, and similar incidental utility plant are to be adjusted to grade in cooperation with work being done by the Contractor.

Unless other wise provided, utilities will not be required to make underground installations in frozen ground.

Utility working days are Monday through Friday, conditions permitting. Times are estimated on the basis of single crew for each utility.

In all cases the Utilities shall be advised well in advance (generally three weeks) before work, dependent upon other work to be done by the Contractor, in any particular area, is to be commenced by them.

A notification process has been agreed to by the Aerial Utilities to assist the contractor. A contact person and telephone number for each utility is listed above for future coordination efforts. Each Utility company beginning with CMP will notify the next (lower elevation) aerial utility company within 3 working days of its work completion.

## **AERIAL**

### ***Summary:***

Utility	Pole Set	New Wires/ Cables	Trans. Wires/ Cables	Remove Poles	Estimated Working Days
Central Maine Power	X	X	X	X	15 plus 20 to coordinate private services
MCI		X	X		See CMP est.
Portland Fire Department		X	X		10
Time Warner Cable			X		3
Verizon			X	X	10
	<b>Total:</b>				38

### ***Utility Specific Issues:***

#### **Central Maine Power**

CMP plans to set new poles, coordinate private business power service outages and relocations and transfer existing cables at miscellaneous locations throughout the project. Poles in the vicinity of the intersection are planned to be set with approximately 43 feet exposed. CMP has agreed to finalize all 'space location' negotiations with other aerial utilities prior to setting new poles. They will require 5 working days for pole set, 20 working days for coordination of private business services and 10 working days for the transfer of existing cables, installation of any new cables and removal of existing poles. A copy of the proposed pole list is attached.

#### **MCI**

MCI's work will be coordinated within CMP's timeframe as the facility exists within the CMP pole space.

#### **Portland Fire Department**

Portland Fire Department plans to coordinate the relocation of fire alarm communications cable with Verizon. More specifically a pole, approximate station 10+239, 10m lt., is to be removed and existing aerial cables will be relocated to both underground and to new aerial locations. An estimate of 10 working days was given to include both aerial and underground work.

#### **Time Warner Cable**

Time Warner Cable lines exist along northeast side of Washington Ave and cross Washington diagonally from Mobil to Dunkin Donuts. Work will include transferring existing lines from old poles to new poles including utilizing slack on the diagonal line to accommodate the shift in pole near Mobil. Effort is estimated at 3 working days with the typical notice procedure.

### **Verizon**

Verizon plans on transferring lines and/or installing new lines after CMP has completed their work. Verizon will also complete some work during the same working days as CMP and will still require 10 working days following the completion of CMP's work. Verizon also plans to assist the Fire Department by keeping trenches open to the extent necessary allowing them to lay new cable before backfilling.

## **SUBSURFACE**

### ***Summary:***

<b>Utility</b>	<b>Summary of Work</b>	<b>Estimated Working Days</b>
Central Maine Power	Coordination of Private Services	See Above
City of Portland – Public Works	None Planned	
City of Portland – Fire Department	Riser Relocation - Trenching	See Above
Northern Utilities	Replace Box/Valve, Adjust To Grade	5
Portland Water District	Adjust Covers To Grade, Service Connections	3
Verizon	Riser Relocation - Trenching	See Above
<b>Total:</b>		8 in addition to days listed in Aerial

### ***Utility Specific Issues:***

#### **Central Maine Power**

CMP's underground work relates to private service installation and/or coordination. This work is completely outside the curb line.

#### **City of Portland – Public Works**

PPW has no planned work. A City/State agreement is in place to account for facility elevation adjustments and storm sewer improvements. A copy of the storm sewer improvements spreadsheet is attached.

#### **City of Portland – Fire Department**

Portland Fire Department plans to coordinate the relocation of fire alarm communications cable with Verizon. More specifically a pole, approximate station 10+239, 10m lt., is to be removed and existing aerial cables will be relocated to both underground and to new aerial locations. An estimate of 10 working days was given to include both aerial and underground work.

### **Northern Utilities**

Northern Utilities Gas Company plans to replace at least four, 4, (five if conditions warrant) existing boxes and valves with new components and adjust to them to grade. Northern Utilities requires a two, 2, week notice to proceed with work. Northern Utilities will coordinate with Portland Water District to complete testing of existing utility elevations where storm drain crossings are to occur.

### **Portland Water District**

PWD has no planned work except for adjusting valve covers to grade. This work will be coordinated with the contractor and will be the responsibility of the Water District. Northern Utilities will coordinate with Portland Water District to complete testing of existing utility elevations where storm drain crossings are to occur.

### **Verizon**

Verizon plans on rerouting lines from a pole at approximate station 10+239, 10m lt. by trenching to a new riser pole. Verizon also agreed to assist the Portland Fire Department with sharing this trench location to the extent possible. Verizon's work will be completed in the 10 day period mentioned for aerial work.

Verizon will remove this pole once final traffic signal span wire has also been removed. This will not occur until the final mast arm poles are installed and the new signal system is operational.

### **BLASTING**

In addition to any other notice which may be required, the Contractor shall notify an authorized representative of each utility having plant close to the site not later than 3:00pm on the working day (Monday through Friday) before he intends to blast. Notice shall state the approximate time of the blast.

### **UTILITY SIGNING**

Any utility working within the construction limits of this project shall ensure that the traveling public is adequately protected at all times. All work areas shall be signed, lighted, and traffic flaggers employed as determined by field conditions. All traffic controls shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices for Streets and Highways, as issued by the Federal Highway Administration.

### **DIG SAFE**

The Contractor shall be responsible for determining the presence of underground utility facilities prior to commencing any excavation work and shall notify utilities of proposed excavation in accordance with M.R.S.A. Title 23 §3360-A, Maine "Dig Safe" System.

**SAFE PRACTICES AROUND UTILITY FACILITIES**

The Contractor shall be responsible for complying with M.R.S.A. Title 35-A, Chapter 7-A Section 751 to 761 Overhead High-Voltage Line Safety Act. Prior to commencing any work that may come within ten feet of any aerial electrical line, the contractor shall notify the aerial utilities as per Section 757 of the above Act.

**THE CONTRACTOR SHALL PLAN AND CONDUCT HIS WORK ACCORDINGLY.**

SPECIAL PROVISION  
SECTION 107  
TIME

The specified contract completion date is June 30, 2004.



**SPECIAL PROVISION**  
**CORRECTIONS, ADDITIONS AND REVISIONS**  
Standard Specifications - Revision of December 2002

**SECTION 101**  
**CONTRACT INTERPRETATION**

**101.2 Definitions - Closeout Documentation**

Replace the sentence “A letter stating the amount..... DBE goals.” with “DBE Goal Attainment Verification Form”

**SECTION 102**  
**DELIVERY OF BIDS**  
(Location and Time)

**102.7.1 Location and Time**

Add the following sentence “As a minimum, the Bidder will submit a Bid Package consisting of the Notice to Contractors, the completed Acknowledgement of Bid Amendments & Submission of Bid Bond Validation Number form, the completed Schedule of Items, 2 copies of the completed Agreement, Offer, & Award form, a Bid Bond or Bid Guarantee, and any other Certifications or Bid Requirements listed in the Bid Book.”

**SECTION 103**  
**AWARD AND CONTRACTING**

**103.3.1 Notice and Information Gathering**

Change the first paragraph to read as follows: “After Bid Opening and as a condition for Award of a Contract, the Department may require an Apparent Successful Bidder to demonstrate to the Department’s satisfaction that the Bidder is responsible and qualified to perform the Work.”

**SECTION 105**  
**GENERAL SCOPE OF WORK**

**105.6.2 Contractor Provided Services**

Change the first paragraph by the addition of the following as the second sentence: “The Contractor is also responsible for providing construction centerline, or close reference points, for all Utility Facilities relocations and adjustments as necessary to complete the Work.”

## SECTION 106 QUALITY

106.6 Acceptance Add the following to paragraph 1 of A: “This includes Sections 401 - Hot Mix Asphalt, 402 - Pavement Smoothness, and 502 - Structural Concrete - Method A - Air Content.”

Add the following to the beginning of paragraph 3 of A: “For pay factors based on Quality Level Analysis, and”

## SECTION 107 TIME

107.3.1 General Add the following: “If a Holiday occurs on a Sunday, the following Monday shall be considered a Holiday. Sunday or Holiday work must be approved by the Department, except that the Contractor may work on Martin Luther King Day, President’s Day, Patriot’s Day, the Friday after Thanksgiving, and Columbus Day without the Department’s approval.”

## SECTION 109 CHANGES

109.1.1 Changes Permitted Add the following to the end of the paragraph: “There will be no adjustment to Contract Time due to an increase or decrease in quantities, compared to those estimated, except as addressed through Contract Modification(s).”

109.1.2 Substantial Changes to Major Items Add the following to the end of the paragraph: “Contract Time adjustments may be made for substantial changes to Major Items when the change affects the Critical Path, as determined by the Department”

## SECTION 402 PAVEMENT SMOOTHNESS

Add the following:

“Projects to have their pavement smoothness analyzed in accordance with this Specification will be so noted in Special Provision 403 - Bituminous Box.”

“402.02 Lot Size Lot size for smoothness will be 1000 lane-meters [3000 lane-feet]. A subplot will consist of 20 lane-meters [50 lane-feet]. Partial lots will be included in the previous lot if less than one-half the size of a normal lot. If greater than one-half the normal lot size, it will be tested as a separate lot.”

## SECTION 502 STRUCTURAL CONCRETE

502.0502 Quality Assurance Method A - Rejection by Resident Change the first sentence to read: “For an individual subplot with test results failing to meet the criteria in Table #1, or if the calculated pay factor for Air Content is less than 0.80.....”

502.0503 Quality Assurance Method B - Rejection by Resident Change the first sentence to read: “For material represented by a verification test with test results failing to meet the criteria in Table #1, the Department will.....”

502.0505 Resolution of Disputed Acceptance Test Results Combine the second and third sentence to read: “Circumstances may arise, however, where the Department may .....”

## SECTION 535 PRECAST, PRESTRESSED CONCRETE SUPERSTRUCTURE

535.02 Materials Change “Steel Strand for Concrete Reinforcement” to “Steel Strand”

535.26 Lateral Post-Tensioning Replace the first paragraph; “A final tension...” with “Overstressing strands for setting losses cannot be accomplished for chuck to chuck lengths of 7.6 m [25 ft] and less. In such instances, refer to the Plans for all materials and methods. Otherwise, post-tensioning shall be in accordance with PCI standards and shall provide the anchorage force noted in the Plans. The applied jacking force shall be no less than 100% of the design jacking force.”

## SECTION 604 MANHOLES, INLETS, AND CATCH BASINS

604.02 Materials Add the following:

“Tops and Traps	712.07
Corrugated Metal Units	712.08
Catch Basin and Manhole Steps	712.09”

## SECTION 615 LOAM

618.02 Materials Make the following change:

<u>Organic Content</u>	<u>Percent by Volume</u>
Humus	“5% - 10%”, as determined by Ignition Test

## SECTION 618 SEEDING

618.01 Description Change the first sentence to read as follows: “This work shall consist of furnishing and applying seed .....” Also remove “,and cellulose fiber mulch” from 618.01(a).

618.03 Rates of Application In 618.03(a), remove the last sentence and replace with the following: “These rates shall apply to Seeding Method 2, 3, and Crown Vetch.”

618.09 Construction Method In 618.09(a) 1, sentence two, replace “100 mm [4 in]” with “25 mm [1 in] (Method 1 areas) and 50 mm [2 in] (Method 2 areas)”

## SECTION 620 GEOTEXTILES

### 620.03 Placement Section (c)

Title: Replace “Non-woven” in title with “Erosion Control”.

First Paragraph: Replace first word “Non-woven” with “Woven monofilament”.

Second Paragraph: Replace second word “Non-woven” with “Erosion Control”.

### 620.07 Shipment, Storage, Protection and Repair of Fabric Section (a)

Replace the third sentence with the following: “Damaged geotextiles, as identified by the Resident, shall be repaired immediately.”

### 620.09 Basis of Payment

Pay Item 620.58: Replace “Non-woven” with “Erosion Control”

Pay Item 620.59: Replace “Non-woven” with “Erosion Control”

## SECTION 626 HIGHWAY SIGNING

### 626.034 Concrete Foundations

Add to the following to the end of the second paragraph: “Pre-cast and cast-in-place foundations shall be warranted against leaning and corrosion for two years after the project is completed. If the lean is greater than 2 degrees from normal or the foundation is spalling within the first two years, the Contractor shall replace the foundation at no extra cost.”

## SECTION 637 DUST CONTROL

637.06 Basis of Payment Add the following after the second sentence of the third paragraph: “Failure by the Contractor to follow Standard Specification or Special Provision - Section 637

and/or the Contractor's own Soil Erosion and Pollution Control Plan concerning Dust Control and/or the Contractor's own Traffic Control Plan concerning Dust Control and/or visible evidence of excessive dust problems, as determined by the Resident, will result in a reduction in payment, computed by reducing the Lump Sum Total by 5% per occurrence per day. The Department's Resident or any other representative of the Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item. Additional penalties may also be assessed in accordance with Special Provision 652 - Work Zone Traffic Control and Standard Specification 656 - Temporary Soil Erosion and Water Pollution Control."

### SECTION 656

#### TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL

656.5.1 If Pay Item 656.75 Provided Replace the second paragraph with the following: "Failure by the Contractor to follow Standard Specification or Special Provision - Section 656 and/or the Contractor's own Soil Erosion and Pollution Control Plan will result in a reduction in payment, computed by reducing the Lump Sum Total by 5% per occurrence per day. The Department's Resident or any other representative of the Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item."

### SECTION 709

#### REINFORCING STEEL AND WELDED STEEL WIRE FABRIC

709.03 Steel Strand Change the second paragraph from "...shall be 12mm [½ inch] AASHTO M203M/M203 (ASTM A416/A416M)..." to "...shall be 15.24 mm [0.600 inch] diameter AASHTO M203 (ASTM A416)..."

### SECTION 712

#### MISCELLANEOUS HIGHWAY MATERIALS

Add the following:

"712.07 Tops, and Traps These metal units shall conform to the plan dimensions and to the following specification requirements for the designated materials.

Gray iron castings shall conform to the requirements of AASHTO M105, Class 30, unless otherwise designated.

Carbon steel castings shall conform to the requirements of AASHTO M103/M103M. Grade shall be 450-240 [65-35] unless otherwise designated.

Structural steel shall conform to the requirements of AASHTO M183/M183M or ASTM A283/A283M, Grade B or better. Galvanizing, where specified for these units, shall conform to the requirements of AASHTO M111.

712.08 Corrugated Metal Units The units shall conform to plan dimensions and the metal to AASHTO M36/M36M. Bituminous coating, when specified, shall conform to AASHTO M190 Type A.

712.09 Catch Basin and Manhole Steps Steps for catch basins and for manholes shall conform to ASTM C478M [ASTM C478], Section 13 for either of the following material:

- (a) Aluminum steps- ASTM B221M, [ASTM B211] Alloy 6061-T6 or 6005-T5.
- (b) Reinforced plastic steps Steel reinforcing bar with injection molded plastic coating copolymer polypropylene. Polypropylene shall conform to ASTM D 4101.

712.23 Flashing Lights Flashing Lights shall be power operated or battery operated as specified.

- (a) Power operated flashing lights shall consist of housing, adapters, lamps, sockets, reflectors, lens, hoods and other necessary equipment designed to give clearly visible signal indications within an angle of at least 45 degrees and from 3 to 90 m [10 to 300 ft] under all light and atmospheric conditions.

Two circuit flasher controllers with a two-circuit filter capable of providing alternate flashing operations at the rate of not less than 50 nor more than 60 flashes per minute shall be provided.

The lamps shall be 650 lumens, 120 volt traffic signal lamps with sockets constructed to properly focus and hold the lamp firmly in position.

The housing shall have a rotatable sun visor not less than 175 mm [7 in] in length designed to shield the lens.

Reflectors shall be of such design that light from a properly focused lamp will reflect the light rays parallel. Reflectors shall have a maximum diameter at the point of contact with the lens of approximately 200 mm [8 in].

The lens shall consist of a round one-piece convex amber material which, when mounted, shall have a visible diameter of approximately 200 mm [8 in]. They shall distribute light and not diffuse it. The distribution of the light shall be asymmetrical in a downward direction. The light distribution of the lens shall not be uniform, but shall consist of a small high intensity portion with narrow distribution for long distance throw and a larger low

intensity portion with wide distribution for short distance throw. Lenses shall be marked to indicate the top and bottom of the lens.

(b) Battery operated flashing lights shall be self-illuminated by an electric lamp behind the lens. These lights shall also be externally illuminated by reflex-reflective elements built into the lens to enable it to be seen by reflex-reflection of the light from the headlights of oncoming traffic. The batteries must be entirely enclosed in a case. A locking device must secure the case. The light shall have a flash rate of not less than 50 nor more than 60 flashes per minute from minus 30 °C [minus 20 °F] to plus 65 °C [plus 150 °F]. The light shall have an on time of not less than 10 percent of the flash cycle. The light beam projected upon a surface perpendicular to the axis of the light beam shall produce a lighted rectangular projection whose minimum horizontal dimension shall be 5 degrees each side of the horizontal axis. The effective intensity shall not have an initial value greater than 15.0 candelas or drop below 4.0 candelas during the first 336 hours of continuous flashing. The illuminated lens shall appear to be uniformly bright over its entire illuminated surface when viewed from any point within an angle of 9 degrees each side of the vertical axis and 5 degrees each side of the horizontal axis. The lens shall not be less than 175 mm [7 in] in diameter including a reflex-reflector ring of 13 mm [½ in] minimum width around the periphery. The lens shall be yellow in color and have a minimum relative luminous transmittance of 0.440 with a luminance of 2854° Kelvin. The lens shall be one-piece construction. The lens material shall be plastic and meet the luminous transmission requirements of this specification. The case containing the batteries and circuitry shall be constructed of a material capable of withstanding abuse equal to or greater than 1.21 mm thick steel [No. 18 U.S. Standard Gage Steel]. The housing and the lens frame, if of metal shall be properly cleaned, degreased and pretreated to promote adhesion. It shall be given one or more coats of enamel which, when dry shall completely obscure the metal. The enamel coating shall be of such quality that when the coated case is struck a light blow with a sharp tool, the paint will not chip or crack and if scratched with a knife will not powder. The case shall be so constructed and closed as to exclude moisture that would affect the proper operation of light. The case shall have a weep hole to allow the escape of moisture from condensation. Photoelectric controls, if provided, shall keep the light operating whenever the ambient light falls below 215 lx [20 foot candles]. Each light shall be plainly marked as to the manufacturer's name and model number.

If required by the Resident, certification as to conformance to these specifications shall be furnished based on results of tests made by an independent testing laboratory. All lights are subject to random inspection and testing. All necessary random samples shall be provided to the Resident upon request without cost to the Department. All such samples shall be returned to the Contractor upon completion of the tests.

712.32 Copper Tubing Copper tubing and fittings shall conform to the requirements of ASTM B88M Type A [ASTM B88, Type K] or better.

712.33 Non-metallic Pipe, Flexible Non-metallic pipe and pipe fittings shall be acceptable flexible pipe manufactured from virgin polyethylene polymer suitable for transmitting liquids intended for human or animal consumption.

712.34 Non-metallic Pipe, Rigid Non-metallic pipe shall be Schedule 40 polyvinylchloride (PVC) that meets the requirement of ASTM D1785. Fittings shall be of the same material.

712.341 Metallic Pipe Metallic pipe shall be ANSI, Standard B36.10, Schedule 40 steel pipe conforming to the requirements of ASTM A53 Types E or S, Grade B. End plates shall be steel conforming to ASTM A36/A36M.

Both the sleeve and end plates shall be hot dip galvanized. Pipe sleeve splices shall be welded splices with full penetration weld before galvanizing.

712.35 Epoxy Resin Epoxy resin for grouting or sealing shall consist of a mineral filled thixotropic, flexible epoxy resin having a pot life of approximately one hour at 10°C [50°F]. The grout shall be an approved product suitable for cementing steel dowels into the preformed holes of curb inlets and adjacent curbing. The sealant shall be an approved product, light gray in color and suitable for coating the surface.

712.36 Bituminous Curb The asphalt cement for bituminous curb shall be of the grade required for the wearing course, or shall be Viscosity Grade AC-20 meeting the current requirements of Subsection 702.01 Asphalt Cement. The aggregate shall conform to the requirements of Subsection 703.07. The coarse aggregate portion retained on the 2.36 mm [No. 8] sieve may be either crushed rock or crushed gravel.

The mineral constituents of the bituminous mixture shall be sized and graded and combined in a composite blend that will produce a stable durable curbing with an acceptable texture. Bituminous material for curb shall meet the requirements of Section 403 - Hot Bituminous Pavement.

712.37 Precast Concrete Slab Portland cement concrete for precast slabs shall meet the requirements of Section 502 - Structural Concrete, Class A.

The slabs shall be precast to the dimension shown on the plans and cross section and in accordance with the Standard Detail plans for Concrete Sidewalk Slab. The surface shall be finished with a float finish in accordance with Subsection 502.14(c). Lift devices of sufficient strength to hold the slab while suspended from cables shall be cast into the top or back of the slab.

712.38 Stone Slab Stone slabs shall be of granite from an acceptable source, hard, durable, predominantly gray in color, free from seams which impair the structural integrity and be of



smooth splitting character. Natural color variations characteristic of the deposit will be permitted. Exposed surfaces shall be free from drill holes or indications of drill holes. The granite slabs in any one section of backslope must be all the same finish.

The granite slabs shall be scabble dressed or sawed to an approximately true plane having no projections or depressions over 13 mm [½ in] under a 600 mm [2 ft] straightedge or over 25 mm [1 in] under a 1200 mm [4 ft] straightedge. The arris at the intersection of the top surface and exposed front face shall be pitched so that the arris line is uniform throughout the length of the installed slabs. The sides shall be square to the exposed face unless the slabs are to be set on a radius or other special condition which requires that the joints be cut to fit, but in any case shall be so finished that when the stones are placed side by side no space more than 20 mm [¾ in] shall show in the joint for the full exposed height.

Liftpin holes in all sides will be allowed except on the exposed face.

## SECTION 717 ROADSIDE IMPROVEMENT MATERIAL

717.05 Mulch Binder. Change the third sentence to read as follows:

“Paper fiber mulch may be used as a binder at the rate of 2.3 kg/unit [5 lb/unit].”

**SPECIAL PROVISION  
SECTION 203  
EXCAVATION AND EMBANKMENT  
(CONTAMINATED SOIL AND GROUNDWATER MANAGEMENT)**

General. The work under this Special Provision shall be performed in conformance with all the procedures and requirements described herein for the following activities: handling, reuse, temporary stockpiling, transportation, storage and disposal for impacted soil and handling, storage, treatment and disposal of impacted groundwater. This Special Provision also addresses impacted soil location, identification and classification. The intent of this Special Provision is to ensure that impacted soil and groundwater encountered during construction are managed in a manner that protects worker health and safety, public welfare and the environment.

Environmental Site Conditions. The Maine Department of Transportation's Environmental Office (MDOT's-ENV) reviewed relevant environmental databases and test-boring data compiled by MDOT for geotechnical purposes along portions of the Allen Avenue project in Portland. The overarching objective of these efforts was to identify and evaluate potential sources of soil and groundwater contamination on or adjacent to the project that could adversely influence design and construction. The review found that the roadway subbase between MDOT Survey Stations 10+080 to roughly 10+240, immediately beneath the paved travel lanes, has been treated with an asphalt-like product. The asphalt-treated soil layer is visually distinct in color (e.g., black) and varies in thickness beneath the pavement. This unit was observed to extend to a depth of approximately 0.30 m below the road surface at select locations.

The origin of the asphalt-like material is likely from a practice commonly employed in the 1950's and 1960's where road-tar or cut asphalt was sprayed on the final grading course before paving. This practice, termed "penetrating" was intended to assist in final grading and to control dust prior to paving.

The results of the database review and geotechnical boring program for this project are available for review from the Hydrogeologist, at MDOT's-ENV in Winthrop (207 624-3100).

Identifying and Classifying Contaminated Soil. MDOT's-ENV will make personnel available to assist the Engineer in the field classification of excavated subbase soils. During any excavation into the subbase beneath the travel lanes, the Engineer or

MDOT-ENV Representative will visually screen soils to assess whether they have been treated with asphalt. If warranted, a photo-ionization detector (PID) may be used to further assess and/or define the subbase material. The Engineer or MDOT-ENV Representative will then classify the soils into the three groups listed below.

**Group 1** soils shall have no visible or olfactory evidence of asphalt treatment or have PID headspace readings of less than 20-ppm<sub>isobutylene</sub>.

**Group 2** soils shall have visual or olfactory evidence of asphalt treatment or have PID headspace readings of 20 ppm<sub>isobutylene</sub> or greater.

**Group 3** soils shall contain evidence of contamination other than the asphalt-like staining described above. Evidence of Group 3 soil contamination shall include, but is not limited to, buried containers, buried drums, underground storage tanks, organic sheen, soil staining, or soil or ground water exhibiting a chemical odor. Group 3 soils are not anticipated on this project.

**Handling and Disposition of Impacted Soil Materials.** Soil material excavated from beneath the traveled roadway shall be handled as follows:

**Group 1** soils are not considered impacted. Thus, special handling and disposal are not required for Group 1 soils.

**Group 2** soils are those treated with an asphalt-like material and are located directly beneath the pavement. Group 2 soils shall be segregated from the underlying Group 1 soils and excavated along with the existing pavement. Handling and final disposition of Group 2 soils and spent pavement will be in accordance with the handling, storage, disposal and beneficial use requirements of cured asphalt under the State of Maine Solid Waste Management Regulations and all other applicable local, state, and federal regulations.

**Group 3** soils are contaminated with constituents other than the asphalt-like material described above. If such soils are encountered they shall be evaluated by MDOT's-ENV and the Maine Department of Environmental Protection (MDEP) before they are excavated. If Group 3 soils or other unexpected contamination is encountered the Contractor shall proceed in accordance with the Contingencies Section of this Special Provision.

**Secured Stockpile Area.** A secured stockpile is not necessary for Group 1 or 2 soils. However, excavated pavement and Group 2 soils shall be handled and managed in accordance with relevant sections of the State of Maine Solid Waste Management Regulations and all other applicable local, state, and federal regulations.

Dewatering. Groundwater contamination is not anticipated on this project. However, if evidence of contaminated water is encountered the Contractor shall stop operations, secure the affected area and immediately notify the Engineer. The Engineer shall notify the MDOT's Hydrogeologist at (207-624-3100) and MDEP (800-482-0777) before excavation or dewatering is commenced.

Dust Control. The Contractor shall employ dust control measures to minimize the creation of potentially contaminated airborne dust during pavement removal, soil excavation and regrading. At no time shall airborne dust concentrations exceed the Occupational Safety and Health Administration's (OSHA's) Permissible Exposure Limits in 29 CFR 1910.1000. As a minimum, standard dust control techniques shall be employed wherever heavy equipment or the public will be traveling. These techniques may include watering-down the site or spreading hygroscopic salts.

Contingencies. If the Contractor encounters unanticipated contamination or potentially hazardous conditions related to contamination, the Contractor shall suspend work in the affected area and notify the Engineer immediately. These conditions include, but are not limited to, encountering buried containers, buried drums, underground storage tanks, petroleum contaminated soils, an organic sheen or soil or ground water exhibiting a chemical odor. The affected area shall be secured in a manner that minimizes risk to workers, the public and the environment. The Engineer will notify MDEP (800-482-0777) and the Hydrogeologist at MDOT's-ENV (207-624-3100). The Engineer, MDEP and the Hydrogeologist shall evaluate the suspected hazard. The Contractor shall write or revise a Health and Safety Plan, as warranted. Work will continue only after the Engineer, the Contractor, and MDEP are satisfied that the work can be done without exposure to workers, the public, or the environment.

Health and Safety/Right-to-Know. Contractors are required to notify their workers of the history of the site and the associated environmental issues. The selected Contractor shall review data available from MDOT's-ENV and determine if this work is covered under OSHA's 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response. If the Contractor concludes that the site is covered by OSHA's 29 CFR 1910.120 then the Contractor shall prepare a Health and Safety Plan (HASP) for its workers and subcontractors who may work in the impacted areas of the project. If the Contractor concludes that the site is not covered under 29 CFR 1910.120 then the Contractor shall notify the Engineer in writing of this determination ten (10) days prior to any project excavation.

If the Contractor determines that a HASP is required it shall satisfy the requirements of 29 CFR 1910.120 and 1926.65, Hazardous Waste Operations and Emergency Response. The HASP shall be developed by a Qualified Health and Safety Professional with documented experience in field implementation of the following federal regulations:

29 CFR 1910.120 or 29 CFR 1926.65	Hazardous Waste Operations and Emergency Response
29 CFR 1910.134	Respiratory Protection
29 CFR 1926.650	Subpart D - Excavations
29 CFR 1926.651	General Requirements
29 CFR 1926.652	Requirements for Protective Systems

The Contractor's HASP shall contain an organizational diagram and provisions for interaction between the Contractor's HASP and those of any subcontractors that choose to have a separate plan. The Contractor shall designate a Hazardous Waste Operations Competent Person (Competent Person) to provide direct on-site supervision and health and safety monitoring for work in areas where workers may be exposed to contamination. The Competent Person shall have certified training and field experience in the implementation of the aforementioned regulations. In the field, the Competent Person shall be responsible for all aspects of worker health and safety arising from the Contractor's work in potentially impacted areas. The Competent Person shall have the authority to designate whether or not a specific construction activity is covered under 29 CFR 1910.12. The Competent Person shall also have the authority to stop work in a contaminated area if hazardous conditions arise or if work practices do not comply with the HASP. Additionally, the Competent Person shall have the responsibility of site and contaminant control for the protection of the public and the environment.

If the Contractor determines that 29 CFR 1910.120 is applicable then workers and subcontractors working in the impacted areas and under the HASP shall be trained in health and safety procedures and be current with medical surveillance as required by OSHA 29 CFR 1910.120 and 1926.65, Hazardous Waste Operations and Emergency Response.

Work inside trench sections in the impacted areas may be subject to OSHA's permit-required confined space regulations under 29 CFR 1910.146.

Health and Safety Monitoring. If deemed warranted by the Contractor, the Competent Person shall monitor the worker's breathing zone for the chemical constituents specified in the Health and Safety Plan for work within the impacted areas of the project. The Contractor shall provide all health and safety monitoring staff and equipment.

Submittals. Ten (10) working days in advance of any excavation work, the Contractor shall submit the following to the Engineer:

- A copy of the HASP or a letter notifying the Engineer that 29 CFR 1910.120 and 1926.65 are not applicable to the Contractor's work on this project.

Method of Measurement. There will be no measurement for environmental field monitoring and classification of impacted soil material (this will be done by the Engineer or MDOT-ENV Representative). There will be no measurement for the development of a Health and Safety Plan, for providing a hazardous waste operations Competent Person or for supplying associated health and safety monitoring. These health and safety items shall be incidental to the site work and excavation. If management of Group 3 soil or impacted groundwater is determined to be necessary by the Engineer, measurement for transportation and disposal shall be in accordance with Subsection 109:04, Differing Site Conditions, Changes, Extra Work and Force Account Work.

Basis of Payment. There will be no payment for environmental field monitoring and classification of impacted soil material (this will be done by the Engineer or MDOT-ENV Representative). There will be no payment for the development of a Health and Safety Plan, for providing a hazardous waste operations Competent Person or for supplying associated health and safety monitoring. These health and safety items shall be incidental to the site work and excavation. If management of Group 3 soil or impacted groundwater is determined to be necessary by the Engineer, payment for transportation and disposal shall be in accordance with Subsection 109:04, Differing Site Conditions, Changes, Extra Work and Force Account Work.

SPECIAL PROVISION  
SECTION 304  
AGGREGATE BASE AND SUBBASE COURSE  
(Aggregate Subbase)

If the Contractor wishes to route public traffic over the completed aggregate subbase course, the course shall be constructed with a minimum 50 mm [2 in] surcharge above the design grade, except as described below. Whenever the surcharge is used, it shall be constructed with material meeting the requirements of Section 703.06(b), Type D Aggregate. Also, whenever, the surcharge is used, it shall be placed on all the aggregate subbase course subjected to public driveways, sidewalks, approach roads, or the outer portions of the shoulders. Removal of the surcharge shall be followed immediately in succession by the fine grading of the aggregate subbase and construction of the next course.

The furnishing, placing, maintaining, and removal of the surcharge will not be paid for directly, but will be considered incidental to the Aggregate Subbase Course pay item.

If salvaged bituminous pavement is placed as the top layer of the aggregate subbase course, a surcharge is not required.

SPECIAL PROVISION  
SECTION 401  
HOT MIX ASPHALT PAVEMENT

**Section 401 - Hot Mix Asphalt Pavement, subsection 401.222 Pay Factor (PF) (Methods A and B), paragraph 1 through 3, has been deleted and replaced with the following revision. These revisions will remain in effect for all Hot Mix Asphalt Pavements to be placed in calendar year 2003.**

**All Hot Mix Asphalts Pavements to be placed in calendar year 2004 will be governed by the limits outlined in Section 401, subsection 401.222 of the Standard Specifications.**

“401.222 Pay Factor (PF) (Methods A and B) The Department will use density, Performance Graded Asphalt Binder content, voids @N<sub>d</sub>, VMA, VFB, F/B<sup>e</sup>, and the screen sizes listed in Table 10 for the type of HMA represented in the JMF. The Department will evaluate materials using the following price adjustment factors under Section 106.7 - Quality Level Analysis.

The Department will apply price adjustments to the appropriate Hot Mix Asphalt Pavement pay items. Price adjustments shall be applied based on test results for each lot. If any pay factor for any single property (or composite gradation) falls below 0.85, the Contractor shall shut down the HMA plant. If any single pay factor for PGAB Content, VMA, or Air Voids falls below 0.75 for Method A or 0.83 for Method B, the composite pay factor for PGAB Content, VMA, and Air Voids shall be 0.55 for Method A or 0.70 for Method B.

If the pay factor for Density falls below 0.75 for Method A or 0.83 for Method B, all of the cores will be randomly recut by Sublot. A new pay factor will be calculated that combines all initial and retest results. If the resulting pay factor is below 0.75 for Method A or below 0.83 for Method B, the entire Lot shall be removed and replaced with material meeting the specifications at no additional cost to the Department. Pay factors equal to or greater than the reject level will be paid accordingly.”



Portland  
STP-7541(00)X  
Washington Ave.  
Allen Ave.  
Intersection Improvements  
September 10, 2003

**SPECIAL PROVISION**  
**SECTION 403**  
**HOT MIX ASPHALT**

Desc. of Course	Grad. Design	Item Number	Bit Cont. % of Mix	Total Thick	No. Of Layers	Comp. Notes
<b><u>Washington Ave.</u></b>						
<b><u>Mill and 150mm Overlay Areas</u></b>						
Wearing	12.5mm	403.208	N/A	40mm	1	5,7
Base	19.0mm	403.207	N/A	110mm	2/more	5,7,11
<b><u>Washington Ave. and Allen Ave.</u></b>						
<b><u>Mill and 40mm Overlay Areas</u></b>						
Wearing	12.5mm	403.208	N/A	40mm	1	5,7
<b><u>Travelway and Shoulder Widening Areas</u></b>						
Wearing	12.5mm	403.208	N/A	40mm	1	5,7
Base	19.0mm	403.207	N/A	110mm	2/more	5,7,11
<b><u>Sidewalks, Drives, &amp; Islands</u></b>						
Wearing	9.5mm	403.209	N/A	50mm	2/more	2,3,9,10,13

**COMPLEMENTARY NOTES**

2. The density requirements are waived.
3. The design traffic level for mix placed shall be <0.3 million ESALS.
5. The aggregate qualities shall meet the design traffic level of 3 to <10 million ESALS for mix placed under this contract.
7. Section 106.6 Acceptance, (1) Method A.
9. Section 106.6 Acceptance, (2) Method C.
10. A "FINE" 9.5 mm mix with a gradation above or through the restricted zone shall be used for this item.
11. A mixture meeting the gradation of 12.5 mm hot mix asphalt may be used at the option of the contractor.
13. A mixture meeting the requirements of section 703.09 Grading 'D', with a minimum PGAB content of 6%, and the limits of Special Provision 401, Table 9 (Drives and Sidewalks) for PGAB content and gradation may be substituted for this item. A job mix formula shall be submitted to the department for approval.

**Tack Coat**

A tack coat of emulsified asphalt, RS-1 or HFMS-1, Item #409.15 shall be applied to any existing pavement at a rate of approximately 0.08 L/m<sup>2</sup>, and on milled pavement approximately 0.2 L/m<sup>2</sup>, prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim / intermediate course and the surface course, at a rate not to exceed 0.08 L/m<sup>2</sup>.

Tack used between layers of pavement will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

SPECIAL PROVISION  
SECTION 403  
TEXTURED ASPHALT PAVEMENT

Description The Contractor shall texture the pavement at those locations shown on the plans. Texturing shall meet the requirements of **Street Print TM Pavement Texturing** or an approved equal. Work shall include coloring the textured asphalt a “brick red” color. Template pattern and color is to be submitted and approved by the Department before application begins.

Method of Measurement The Department will measure the quantity of Textured Asphalt Pavement by the square meter [square yard].

Basis of Payment Payment will be for the accepted quantity of Textured Asphalt Pavement at the contract unit price, which will be full compensation for all labor, materials, and incidentals needed to satisfactorily complete the work.

Payment will be made under;

Pay Item

Pay Unit

403.1021 Textured Asphalt Pavement

Square Meter [Square Yard]

SPECIAL PROVISION

SECTION 603  
CULVERTS, STORM DRAINS, AND SEWER PIPE

603.011 DESCRIPTION:

This work shall consist of the construction of culverts, storm drains, sewer pipes, hereinafter referred to as "pipe" as shown on the plans, details, and specified herein.

The Contractor shall install locating/warning tape over the centerline of all sanitary, storm, and combined sewer pipes including main lines and catch basin laterals both within the right of way and outside of the established street as required by City ordinance. Both a green warning tape and a number 10 or 12 gauge single strand coated wire shall be installed at a maximum of 24 inches below finish surface grade for the entire length of the pipe. Magnetic warning tape may be used in place of the separate warning tape and wire.

603.012 MATERIALS:

Materials shall meet the requirements specified for the various subsections of the specifications listed below:

Asphalt Coated Corrugated Metal Pipe and Pipe Arches-----	Stand. Spec. -----	707.03
Cast Iron Pipe -----	Stand. Spec. -----	707.01
Cement Concrete Pipe -----	Stand. Spec. -----	706.01
Clay Pipe -----	Stand. Spec. -----	706.07
Corrugated Metal Pipe and Pipe Arches-----	Stand. Spec. -----	707.02
Reinforced Concrete Pipe -----	Stand. Spec. -----	706.02
Vitrified Clay Pipe-----	ASTM-----	C200
P.V.C. Ring Type Sewer Pipe - (SDR 35 or Equal) -----	ASTM-----	D3034
Aggregate Base - Screened or Crushed-----	Stand. Spec. -----	703.06 (a)
Aggregate Subbase - Sand -----	Stand. Spec. -----	703.06 (b)
Crushed Stone for Pipe Bedding-----	Stand. Spec. -----	703.30

Hydraulic Brake - Type Flow Restrictor - All welded construction using 12 gauge, Type 304 stainless steel. Welded by TIG or MIG process with electrode having a tensile strength equal to the tensile strength of the base metal. Corner joints shall be joined with convex single V-groove welds, T-joints shall be joined with continuous convex fillet weld with legs equal to twice the thickness of base metal. Outlet sleeve shall be equal in length to its internal diameter with a minimum length of 10", roll formed with double O-ring gaskets and backing rings. Backing rings shall have a diameter equal to 50% of the gasket diameter; gaskets shall have varying diameters; gasket closest to chamber shall be 3" from chamber, gasket furthest from chamber shall be within 2" of end of outlet sleeve.

603.013 CONSTRUCTION REQUIREMENTS:

PSM POLY VINYL CHLORIDE SEWER PIPE AND FITTINGS:

Each pipe length shall be inspected before being laid. Pipe shall be laid to conform to the lines and grades indicated on the drawings. Each pipe shall be so laid as to form a close joint with the next adjoining pipe and bring the inverts continuously to the required grade.

Bell holes shall be excavated or provided in the base material to receive the bell or coupling so that only the barrel of the pipe receives bearing pressure from the supporting material.

When each pipe has been properly bedded, enough of the backfill material shall be placed and compacted between the pipe and the sides of the trench to hold the pipe in correct alignment.

No pipe or fitting shall be permanently supported on blocks, wedges, boards or stones.

All joints shall be made in a dry trench and in accordance with the manufacturer's recommendations.

All PVC Gravity Sewer Pipe supplied shall conform to all aspects of ASTM specification D3034-73A and/or ASTM Spec. F789 for PVC sewer pipe, joints and fittings. Joints shall be rubber gasketed "Bell and Spigot" type. Installation of materials shall be as suggested in ASTM D2321. Minimum "pipe stiffness" at 4% deflection shall be 46 psi for all sizes when tested in accordance with ASTM D2421.

It is the responsibility of the Contractor to assure that the trench and the backfill around the pipe has been compacted sufficiently to limit deflection in the pipe to no more than 4%. All flexible pipe installed under this contract shall be tested by a "go-no-go" mandrel permitting no greater than 4% deflection. Testing of the pipe shall be done in the presence of a city inspector. The inspector shall be given a minimum of 24 hour advance notice before testing is to take place. All pipe not passing the 4% deflection limit test shall be removed and replaced at no additional cost to the City.

Pipe bundles shall be stored on a flat surface so as to support the barrels evenly. This is important as in hot weather PVC pipe will deflect or warp causing installing problems in line and grade. If a warped section is found, the Contractor shall not use such length of pipe.

In order to ensure proper compaction, alignment, and grade, and eliminate any construction problems that may be encountered, the Contractor shall be required to use only the 12-1/2 foot lengths of PVC pipe.

Pipe shall remain stacked in the original shipping bundles, and only pipe taken off the bundle for one day's laying shall be distributed along the trench.

PVC pipe will not bond to concrete or mortar and therefore connection to a cast-in-place or brick manhole and catch basin shall be made as shown on the pipe connection detail of the project plans.

REINFORCED CONCRETE PIPE:

Reinforced concrete pipe shall be obtained only from a manufacturer of established good reputation in the industry. The pipe shall have a smooth and even interior surface, free from projections, indentations, or irregularities of any kind.

The joint shall be such that when joined the pipes will form a continuous and uniform line without projections, off-sets or irregularities and be capable of satisfying the specified leakage requirements.

Pipes shall be joined with rubber or rubber type gaskets that conform to the requirements established in ASTM Designation 443-67.

Each length of pipe shall be provided with proper ends made either of concrete formed on machined rings to ensure accurate joint surfaces or of metal rings. The diameters of the joints surface, depended upon to compress the gasket, shall not vary from the theoretical diameters by more than 1/16 inch. The joint shall be sealed by the rubber gasket so that the joint will remain tight under all conditions of service.

603.013 CONSTRUCTION REQUIREMENTS: (continued)

REINFORCED CONCRETE PIPE: (continued)

The rubber gasket shall be applied in accordance with the manufacturer's recommendations.

After the pipes are aligned in the trench and are ready to be jointed, all joint surfaces shall be cleaned. Immediately before jointing the pipe, the inside surface of the groove shall be thoroughly lubricated with a recommended lubricant. Pipe shall then be coupled immediately by carefully pushing each pipe into place without damage to pipe or gasket. The position of the gasket in the joint shall then be inspected to be sure it is properly put together and is tight.

Pipes shall be coupled by any suitable arrangement of come-along, winch, jack, or other power equipment that can exert sufficient force to couple pipe to its tightest position.

All pipe thirty-six inches in diameter or larger shall be sealed on the inside with cement mortar or with gunite by the grout-weld method using a pneumatic machine of the Nicholson, Bondactor, or equal type. Cement mortar if used shall be applied by trowel and the joint shall be thoroughly filled and finished smoothly with the inside surface of the pipe. The grout-weld seal shall be applied only by experienced and skilled workmen in accordance with the instructions of the manufacturers of the machine.

The pipe shall be laid accurately to line and grade. Pipe bedded in compacted crushed stone shall not be supported on blocking, wedges, brick, or anything except the bedding material. Pipe on concrete cradle shall be supported on solid concrete blocks or precast concrete saddles which become part of the completed cradle.

Each length of pipe shall be shoved home against the pipe previously laid, and held securely in position. Joints shall not be "pulled" or "cramped". Holes provided for jointing shall be filled and compacted.

Pipe from which a core has been cut and the resulting hole repaired, shall be placed with the cored hole located forty-five degrees above or below the horizontal centerline of the pipe.

To prevent the entrance of earth and other materials when pipe laying is not actually in progress, the open ends of pipe shall be closed by suitable temporary bulkheads. The Contractor shall take all necessary precautions to prevent floatation of the pipe because of flooding of the trench. If water is in the trench when work is resumed, the bulkheads shall not be removed until the danger of earth and other materials entering the pipe has passed.

All pipe joints and structures shall be made water tight. There shall be no visible leakage, spurting or gushing of water, sand, silt, clay or soil of any description entering the pipe lines at the joints or structures. Where there is evidence of water or soil entering the pipeline, connecting pipes or structures, defects shall be repaired.

HDPE STORM DRAIN PIPE:

The storm sewer pipe shall be N-12 ProLink Ultra Pipe (12"-42") or N-12 HC ProLink ST (48") as manufactured by the Advanced Drainage Systems, Inc., or preapproved equal.

The product supplied under this specification shall be high density polyethylene pipe with a corrugated exterior and smooth interior for 12" to 42" diameters meeting AASHTO M 294M (Type S), and a profile wall pipe with a smooth interior and exterior for 48" diameter meeting AASHTO M 294M (Type D). Material shall meet ASTM D3350 resin cell classification 335420C. Flow calculations shall be based on a Mannings "n" value of 0.012.

**603.014 TESTING:**

Gravity sewers shall be tested by one of the following methods:

- a. Low pressure air
- b. Infiltration
- c. Exfiltration

Approval of method will be made by the Engineer with due consideration for subsurface conditions and size and type of pipe.

The Contractor shall have the proper plugs, weirs, and other equipment to perform all required tests. Testing of each section of sewer installed shall include the portions of service laterals installed under this contract.

**a. LOW PRESSURE AIR:**

When low pressure air test is used, it shall be conducted in compliance with the following:

After completing backfill of the wastewater line, the Contractor shall, at no additional cost to the City, conduct a line acceptance test using low pressure air. The test shall be performed according to stated procedures and in the presence of the Engineer.

Procedures: All pneumatic plugs shall be seal tested before being used in the actual test installation. One (1) length of pipe shall be laid on the ground and sealed at both ends with the pneumatic plugs to be checked. Air shall be introduced into the plugs at 25 psig. The sealed pipe shall be pressured to 5 psig. The plugs shall hold against this pressure without bracing and without movement of the plugs out of the pipes.

After a manhole to manhole reach of pipe has been backfilled and cleaned, and the pneumatic plugs are checked by the above procedure, the plugs shall be placed in the line at each manhole and inflated to 25 psig. Low pressure air shall be introduced into this sealed line until the internal air pressure reaches 4 psig greater than the average back pressure off any ground water that may be over the pipe. At least two minutes shall be allowed for the air pressure to stabilize.

After the stabilization period (3.5 psig minimum pressure in the pipe), the air hose from the control panel to the air supply shall be disconnected. The portion of line being tested shall be termed "acceptable" if the time required in minutes for the pressure to decrease from 3.5 to 2.5 psig (greater than average back pressure of any ground water that may be over the pipe) shall not be less than the time shown for the given diameters in the following table:

Pipe Diameter (In Inches)	Minutes
4.....	2.0
6.....	3.0
8.....	4.0
10.....	5.0
12.....	5.5
15.....	7.5
18.....	8.5
21.....	10.0
24.....	11.5

603.014 TESTING: (continued)

In areas where groundwater is known to exist, the Contractor shall install a one-half inch diameter capped pipe nipple, approximately 10" long, through the manhole wall on top of one of the sewer lines entering the manhole. This shall be done at the time the sewer line is installed. Immediately prior to the performance of the Line Acceptance Test, the groundwater shall be determined by removing the pipe cap, blowing air through the pipe nipple into the ground so as to clear it, and then connecting a clear plastic tube to the nipple. The hose shall be held vertically and a measurement of the height in feet shall be divided by 2.3 to establish the pounds of pressure that will be added to all readings. (For example, if the height of the water is 11-1/2 feet, then the added pressure will be 5 psig, and the 2.5 psig to 7.5 psig. The allowable drop of one pound and the timing shall remain the same.)

If the installation fails the air test, the contractor shall, at no additional cost to the City, determine the source of the leakage. He shall then repair or replace all defective materials and/or workmanship.

b. INFILTRATION:

An infiltration test requires groundwater levels to be a minimum of one foot above the crown of the pipe of the high end of the section being tested. Infiltration test procedures are:

- a. Engineer to determine length of sewer main and the connecting lines to be tested.
- b. With all connecting pipes plugged (other than those included in test section) install a V notch weir in downstream end of pipe. The V notch weir must be constructed accurately and installed to maintain a watertight seal between weir and pipe.
- c. Allow time for water to build up behind weir until steady, uniform flow passes through V notch.
- d. Readings shall be taken and recorded.

c. EXFILTRATION:

Exfiltration test procedures are:

- a. Engineer to determine length of sewer to be tested.
- b. Properly cap or plug and block service laterals, stubs and fittings into sewer lines being tested.
- c. Plug upstream and downstream ends of test section providing a water supply connection downstream and standpipe in manhole upstream.
- d. Fill test section and upstream standpipe and allow time for water absorption in manholes.
- e. Measure drop in upstream standpipe over 3 or 4 - 15 minute periods and compute leakage.

Note: The upstream manhole may be used as the standpipe. Test sections shall be kept short enough to maintain a reasonably low head to prevent excess pressures.

Leakage in gravity sewers shall not exceed 300 gallons per inch diameter, per day, per mile of pipe when tested by either internal pressure or external pressure means. Should the pipe as laid fail to meet these requirements, the Contractor shall perform the necessary work, at no additional cost to the City, to meet these requirements.

603.015 INSPECTION:

Pipe may be inspected at the manufacturing plant, or on the work site and shall be subject to rejection at any time, even though sample pipes may have been accepted as satisfactory at the manufacturing plant.

All pipe shall be subject to thorough inspection and tests. All tests shall be made in accordance with the methods prescribed by, and the acceptance or rejections shall be based on, applicable ASTM specifications.

Pipe will be inspected upon delivery and all pipe which does not conform to the requirements of this contract will be rejected and shall be immediately removed from the work area by the Contractor.

Unsatisfactory pipe will be either permanently rejected or minor repairs made. After delivery, any pipe will be rejected which has been damaged beyond the possibility of satisfactory repair.

If such pipe is found in the pipeline, it shall be removed and replaced or encased in a Class A concrete collar or envelope as directed, at no additional cost to the City.

The Engineer shall have the right to take samples of the concrete after it has been mixed, or as it is being placed in the forms, and to require cores to be cut from the finished pipe for any inspection and tests he may require. Holes left by the removal of cores shall be filled in an approved manner by the Contractor at no additional cost to the City.

603.11 METHOD OF MEASUREMENT:

Pipes will be measured by the linear meter in place within the limits specified below.

For measurement purposes the end of the pipe in closed structures will be considered at the inside face of the wall, and in masonry headwalls it will be considered to be at least the face of the headwall.

603.12 BASIS OF PAYMENT:

The accepted quantities of pipe for culverts, drains and sewers will be paid for at the contract unit price per linear meter, complete in place. The cost of testing and testing materials shall be included in the contract unit price and no additional payment will be made.

Payment for trench excavation to the established trench profile indicated on the plans with the exception of structural rock excavation, will be included in this item. Payment for approved undercuts below the established trench profile will be paid for under Item 206.061 - Structural Earth Excavation.

Rock excavation will be paid for as Structural Rock Excavation as specified in Section 206 of the Supplemental Specifications.

Backfilling of the trench shall be incidental to this item, excepting if Granular Borrow is used. Granular Borrow will be paid for under pay item 203.25.

Should the Contractor elect to utilize "drag boxes" during sewer line installation work, overcutting of the trench beyond the limits for excavation shown on the Typical Trench Details will be allowed to accommodate the boxes. However, no payment will be made for the excess excavation and backfill material beyond the payment limit, dimension "A", as shown on the Typical Trench Detail.



603.12 BASIS OF PAYMENT: (continued)

The cost of locating/warning tape including installation shall be considered incidental to the appropriate pipe item.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
603.159	300mm (12") Culvert Pipe Option III	Linear Meter
603.169	375mm (15") Culvert Pipe Option III	Linear Meter
603.179	450mm (18") Culvert Pipe Option III	Linear Meter

SPECIAL PROVISION

SECTION 604  
MANHOLES AND CATCH BASINS

The provisions of Section 604 of the Standard Specifications shall apply with the following additions and modifications:

604.03 CONSTRUCTION REQUIREMENTS:

Concrete Blocks shall not be used in any way in the construction or alteration of manholes or catch basins.

All manhole bases, barrel sections and top sections shall be marked, by the manufacturer, with the appropriate manhole station (and offset if applicable) and the street name, if more than one street is incorporated within a single contract.

Between the third and fourth paragraphs of the Subsection insert the following paragraphs.

Sanitary sewer inverts shall be constructed by brick masonry or approved fiberglass insert.

Special precautions shall be taken to provide adequate ventilation and attending personnel for the safety of all workers who may be required to enter existing sewers or sewers under construction.

It is emphasized to the Contractor that sanitary sewer and drainage construction under this contract shall be coordinated with existing sewer facilities so that continuous service and handling of existing flows is accomplished.

In the existing fifth paragraph, first sentence of that Subsection delete only "Metal frames and traps", and substitute therefore "Metal frames, steps, other appurtenances, and traps".

The outside surface of any masonry work for catch basins and manholes shall be plastered with mortar from 1/4 inch to 3/8 inch thick. The masonry shall be properly wetted before the plaster is applied. The plaster shall be carefully spread and troweled so that all cracks are thoroughly worked out. After hardening, the plaster shall be carefully checked by being tapped for bond and soundness.

All brick masonry surfaces with mortar shall be waterproofed with one coat of DEHYDRATINE 6 TROWEL MASTIC, DEHYDRATINE 10 SEMI-MASTIC or approved equal.

All poured concrete or precast concrete surfaces shall be waterproofed with two heavy coats of bituminous waterproofing materials. The material shall be MINWAX FIBROUS BRUSH COAT made by the Minwax Company, New York, New York; TREMCO 121 FOUNDATION COATING, made by the Tremco Manufacturing Company, Cleveland, Ohio; INERTOL NO-7 made by Inertol Company, Newark, New Jersey or approved equal.

All waterproofing material shall be applied according to the manufacturer's specifications and directions.

Catch basins shall be constructed as shown on the "Standard Details, Catch Basins and Inlets" of the contract drawings. Unless otherwise indicated, catch basins shall have A-4 inlet stones and Casco traps which shall be incidental to the contract unit price of the structure.

All sanitary street sewers and sanitary interceptors shall be constructed using solid manhole covers unless otherwise indicated.

Leakage tests may be required on each manhole. The tests, if ordered, shall be the exfiltration test made as described below:

After the manhole has been assembled in place, all lifting holes and all exterior joints shall be filled and pointed with an approved non-shrinking grout or approved bituminous mastic as shown on the construction drawings. The test shall be made prior to placing the shelf and invert and before filling and

pointing the horizontal joints. If the groundwater table has been allowed to rise above the bottom of the manhole, it shall be lowered for the duration of the test. All pipes and other openings into the manhole, it shall be suitably plugged and the plugs rased to prevent blow out.

604.03 CONSTRUCTION REQUIREMENTS: (continued)

The manhole shall then be filled with water to the top of the cone section. If the excavation has not been backfilled and observation indicates no visible leakage, that is, no water visibly moving down the surface of the manhole, the manhole may be considered to be satisfactorily water-tight. If the test, as described above is unsatisfactory, or if the manhole excavation has been backfilled, the test shall be continued. A period of time may be permitted if the Contractor so wishes, to allow for absorption. At the end of this period, the manhole shall be refilled to the top of the cone, if necessary, and the measuring time of at least 8 hours begun. At the end of the test period, the manhole shall be refilled to the top of the cone, measuring the volume of water added. This amount shall be extrapolated to a 24-hour rate and the leakage determined on the basis of depth. The leakage for each manhole shall not exceed 1 gallon per vertical foot for a 24-hour period. If the test fails this requirement, but the leakage does not exceed 3 gallons per vertical foot per day, repairs by approved methods may be made to bring the leakage within the allowable rate of 1 gallon per foot per day.

Leakage due to a defective section or joint or exceeding the 3 gallon per vertical foot per day shall be the cause for the rejection of the manhole. It shall be the Contractor's responsibility to uncover the manhole as necessary and to disassemble, reconstruct or replace it. The manhole shall then be retested and, if satisfactory, interior joints shall be filled and pointed.

No adjustment in the leakage allowance will be made for unknown causes such as leaking plugs and absorptions. It will be assumed that all loss of water during the test is a result of leaks through the joints or through the concrete. Furthermore, the Contractor shall take any steps necessary to assure the Engineer that the water table is below the bottom of the manhole throughout the test.

604.031 Construction Requirements: Alter (Rehabilitate) Existing Manholes

604.0311 INTENT: To provide a system for manhole reconstruction that stops inflow, infiltration, exfiltration, restores structural integrity and provides protection against corrosion.

604.0312 GENERAL:

604.03121 SCOPE:

This specification shall govern all work, materials, and equipment required for substrate rehabilitation for the purpose of eliminating infiltration, providing corrosion protection, repair of voids, and restoration of the structural integrity of the substrate as a result of applying a monolithic fiber-reinforced structural/structurally enhanced cementitious liner to the wall and bench surfaces of brick, concrete, or any other masonry construction material.

Described are procedures for cleaning, preparation, application and testing. The applicator, approved and trained by the manufacturer, shall furnish all labor, equipment and materials for applying a cementitious mix to form a structural monolithic liner of a minimum 1/2 inch thickness, with machinery specially designed and manufactured by the material supplier for the application. All aspects of the installation shall be in accordance with the manufacturer's recommendation and per the following specifications which includes:

- A. the removal of any loose and unsound material.
- B. cleaning of the area to be sprayed with high pressure water.
- C. the repair and filling of voids.

604.03 CONSTRUCTION REQUIREMENTS: (continued)

- D. the repair and sealing of invert and benches
- E. the elimination of active infiltration prior to making the application.
- F. the spray application of a cementitious mix to form a structural/structurally enhanced monolithic liner.

604.0313 MATERIALS:

604.03131 PATCHING MATERIAL (Strong-Seal® QSR or Equal)

Strong-Seal® QSR (or equal), a quick setting fiber reinforced calcium aluminate corrosion resistant cementitious material, shall be used as a patching material and is to be mixed and applied according to manufacturer's recommendations and shall have the following minimum requirements:

A.	Compressive Strength	ASTM C109	1400 psi, 6 Hrs.
B.	Bond	ASTM C321	145 psi, 28 days
C.	Cement		sulfate resistant
D.	Applied Density		105 lbs. ± 5 lbs. pcf
E.	Shrinkage	ASTM C596	0% at 90% R.H.

604.03132 INFILTRATION CONTROL MATERIAL (Strong-Seal® Strong-Plug or Equal)

Strong-Plug, a rapid setting cementitious product specifically formulated for leak control, shall be used to stop minor water infiltration and shall be mixed and applied according to manufacturer's recommendations and shall have the following minimum requirements:

A.	Compressive strength	ASTM C109	400 - 600 psi, 1 hr. 1800- 2400 psi, 24 hrs.
B.	Expansion	ASTM C827	10%
C.	Sulfate Resistance	ASTM C267	No weight loss after 15 cycles, 200 ppm; test continuing.
D.	Freeze/Thaw	ASTM C666 "Method A"	100 cycles
E.	Pull out strength	ASTM C234	14000 lbs.
F.	Placement time		< 1.0 minute

604.03133 GROUTING MATERIAL

1. Strong-Seal® (or equal) Grout 250, a cementitious grout, shall be used for stopping very active infiltration and filling voids and shall be mixed and applied according to manufacturer's recommendations. The cementitious grout shall be volume stable, and have a minimum 28 day compressive strength of 250 psi.
2. Strong-Seal® (or Equal) Grout 1000, a cementitious grout, shall be used for same application as Grout 250, but is designed for special soil conditions, and shall be used per manufacturer's recommendations. The cementitious grout shall be volume stable and have a minimum 28 day compressive strength of 1000 psi.
3. Chemical grouts may be used for stopping very active infiltration and shall be mixed and applied per manufacturer's recommendations.

604.03134 LINER MATERIAL:

Strong Seal® or Equal cementitious-based liner products shall be used to form a structural/structurally enhanced monolithic liner covering all interior substrate surfaces and shall have the following minimum requirements at 28 days:

			<u>MS-2A/MS-2C</u>	<u>SEWPERCOAT®</u>
A.	Compressive Strength	ASTM C109	>3000 psi	> 9000 psi
B.	Tensile Strength	ASTM C496	> 300 psi	> 800 psi
C.	Flexural Strength	ASTM C78	> 600 psi	>12000 psi
D.	Shrinkage @ 90% R.H.	ASTM C596	0%	0%
E.	Bond	ASTM C952	>130 psi	> 130 psi
F.	Density, when applied		105 pcf± 5 lbs.	150 pcf± 5 lbs.

1. Strong-Seal® (or Equal) MS-2A shall be made with type 1 or Type III Portland Cement and shall be used according to manufacturer's recommendations in applications where there is no or very mild sulfide conditions (pH 3.0 or higher).
2. Strong-Seal® (or Equal) MS-2C shall be made with Calcium Aluminate Cement and shall be used according to manufacturer's recommendations in applications where there is evidence of severe sulfide conditions (pH 2.0 or higher).
3. Strong-Seal® SewperCoat® (or Equal) shall be made with Calcium Aluminate Cement and calcium aluminate aggregate and shall be used per manufacturer's recommendations in any harsh hydrogen sulfide conditions regardless of surface pH as long as environment is in a municipal sanitary system. Refer to SewperCoat® PG specifications for physical properties and application procedures.

Strong-Seal® MS-2A or MS-2C product or approved equivalents shall be factory blended requiring only the addition of water at the jobsite. The bag weight shall be 50-51 pounds. The cement content shall be 50%-60% of total weight of bag. The content shall have a dry bulk density of 54-56 pounds per cubic foot and when mixed with manufacturer's recommended amount of water shall have a wet density not to exceed 105 pcf± 5 pounds and shall yield a minimum of .63 cubic foot of volume per bag.

Strong-Seal® SewperCoat® PG product or approved equivalents shall be factory blended requiring only the addition of water at the jobsite. The cement and aggregate shall be 100% calcium aluminate. The bag weight shall be 64-66 pounds. The dry bulk density shall be 88-92 pounds per cubic foot.

All Strong-Seal® (or Equal) products shall be reinforced with alkaline resistant fiberglass rods not less than 1/2 inch in length nor greater than 5/8 inches.

The material should meet or exceed industry standards and shall not have any basic ingredient that exceeds EPA maximum allowable limit for any heavy metal.

604.03135 WATER:

Water used to mix product shall be clean and potable. Questionable water shall be tested by a laboratory in accordance per ASTM C-94 procedure. Potable water need not be tested.

604.03136 OTHER MATERIALS:

No other material shall be used with the mixes described in 604.03131, 604.03132, 604.03133, and 604.03134 without prior approval or recommendation from Strong-Seal® Systems.

604.0314 EQUIPMENT:

604.03141

Applicator must use approved equipment designed and manufactured by the material supplier specifically for the application of cementitious liners in sanitary system manholes and manufacturer of equipment must provide proof of being in the business of designing and manufacturing of mixing, pumping and spraying equipment for at least 20 years.

The manufacturer must also provide a list of at least 20 customers using equipment for application of a cementitious liner in sanitary system manholes.

604.03142

Specially designed machines consisting of an optimized progressive cavity pump capable of producing a minimum of 250 psi pumping pressure, patented contrablend mixer with twin ribbon paddles with end discharge or a Strong-Seal® continuous mixer, and an air system for low velocity spray application of product, shall be used for applying Strong-Seal® Systems products. Equipment is complete with water storage and metering system. Mixer and pump are hydraulically powered. SprayMate® models 35C and 35D or the Strong-Seal® MiniMate™ are approved machines for applying Strong-Seal® Systems products.

604.0315 HISTORY:

Product must have a minimum of 5 year history of being used for reconstruction of sanitary system manholes.

Manufacturer must provide a list of at least 30 manhole projects completed during the past 3 years.

Applicator must be factory trained and provide copy of certificate acknowledging status as being an approved applicator.

Any product submitted must have been successfully demonstrated to the satisfaction of the City and approved as an equal prior to bid.

604.0316 APPLICATION:

604.03161 PREPARATION

1. Place covers over invert to prevent extraneous material from entering the sewer lines.
2. All foreign material shall be removed from the manhole wall and bench using a high pressure water spray (minimum 1200 psi). Loose and protruding brick, mortar, and concrete shall be removed using a mason's hammer and chisel and/or scraper. Fill any large voids with quick setting patching mix (paragraph 604.03131).
3. Active leaks shall be stopped using quick setting, specially formulated mixes (paragraphs 604.03131 and 604.03132) according to manufacturer's recommendations. Some leaks may require weep holes to localize the infiltration during the application. After application the weep holes shall be plugged with the quick setting material (paragraph 604.03132) prior to the application of the final coat. When severe infiltration exists, drilling may be required in order to pressure grout using a cementitious grout (paragraph 604.03133) or chemical grout (subparagraph 3). Manufacturer's recommendations shall be followed when pressure grouting is required.

604.03162 INVERT REPAIR

1. After all preparations have been completed, remove all loose material and wash wall again.
2. Any bench, invert, or service line repairs shall be made at this time using the quick setting patching mix (paragraph 604.03131) and shall be used per manufacturer's recommendations.
3. Invert repair shall be performed on all inverts with visible damage or where infiltration is present or when vacuum testing is specified. After blocking flow through the manhole, and thoroughly cleaning invert, the quick setting patch material (paragraph 604.031.31) shall be applied to the invert in an expeditious manner. The material shall be troweled uniformly onto the damaged invert at a minimum thickness of 1/2 inch at the invert extending out onto the bench of the manhole sufficiently to tie into the structural/structurally enhanced monolithic liner to be spray applied. The finished invert surfaces shall be smooth and free of ridges. The flow may be reestablished in the manhole within 30 minutes after placement of the material.

604.03163 MIXING OF LINER MATERIALS:

1. For each bag of product, use the amount of water or water settings required per manufacturer's recommendations following mixing procedures noted on product bag and using the approved equipment for mixing and application.
2. Prepared mix shall be discharged into a hopper and mixing shall continue to occur in such a manner as to allow spraying continuously without interruption until each application is complete.

604.03164 SPRAYING:

604.031641 BASE COAT APPLICATION

The surface shall be clean and free of all foreign material and shall be damp without noticeable free water droplets or running water, but totally saturated, just prior to application. Materials shall be spray applied from the bottom of the wall to the top, using as many passes as necessary, but each application shall not exceed 1/2 inch. The surface is to be rough troweled after each pass. The light troweling is performed to assure that material penetrates the voids and sets the bond.

604.031642 FINAL APPLICATION

A final application, mixed per specifications as per paragraph 604.03163, shall be applied after the base coat applications has been rough troweled. Manufacturer's recommendations shall be followed whenever more than 24 hours have elapsed between applications. The final application shall be applied to assure a minimum total thickness of 1/2 inch. Again, application shall be from the bottom up. The surface is then troweled to a relatively smooth finish being careful not to over trowel. A brush finish is then applied to the troweled finish or top coat surface.

604.031643 BENCH APPLICATION

The wooden covers shall be removed at this time and the bench sprayed with materials mixed per specifications as per section 604.03163 and spray applied in such a manner that a gradual slope is produced from the walls to the invert with the thickness at the invert to be no less than 1/2 inch. The wall/bench intersection shall be rounded to a uniform radius the full circumference of the intersection.

604.0317 CURING:

Caution should be taken to minimize exposure of applied product to sunlight and air movement. If time between application of additional coats is to be longer than 15 minutes, the structure shall be covered. At no time should the finished product be exposed to sunlight or air movement for longer than 15 minutes before covering or closing access. In extremely hot and arid climates, manhole should be shaded while reconstruction is in process and a concrete curing agent should be used if humidity level is less than 70% within the manhole. Contact manufacturer for curing compound recommendations.

604.03171

The final application of Strong-Seal (or Equal) liner products shall have the following minimum cure times before being subjected to flows:

	<b>Hold Time Before Releasing Flow</b>		
	MS-2A or Equal Product	MS-2C or Equal Product	SEWPERCOAT® (or Equal) PG
storm run-off & surcharge	8 hours	4 hours	4 hours
force main impact	12 hours	6 hours	6 hours



604.0312

After final application of the Strong-Seal liner product, traffic shall be withheld as noted per the following:

**Hold Time Before Allowing Traffic Flow**

MS-2A or Equal Product 24 hours	MS-2C or Equal Product 6-8 hours	SEWPERCOAT® (or Equal) PG 6-8 hours
---------------------------------------	--	---

Whether it is not practical to defer traffic for 24 hours, Strong-Seal calcium aluminate based products shall be used whether corrosion is the issue or not.

604.0318 WEATHER:

No application shall be made if ambient temperature is below 40 degrees F. No application shall be made to frozen surfaces or if freezing is expected to occur within the substrate within 24 hours after application.

Precautions shall be taken to keep the mix temperature at time of application below 90 degrees F. Water temperature shall not exceed 80 degrees F. Chill with ice if necessary.

604.0319 PRODUCT TESTING:

Four two inch cubes shall be cast each day or from every pallet of product used, and shall be properly packaged, labeled and returned to manufacturer for testing in accordance with the owner's or manufacturer's directions for compression strength per ASTM C109 procedure.

604.040 DRAINAGE STRUCTURES ABANDONED OR REMOVED:

The existing castings on manholes and/or catch basins to be abandoned or removed shall be carefully removed, cleaned and delivered to the City of Portland's stockyard as directed. All such castings shall become the property of the City.

Inlet stones for catch basins to be abandoned or removed shall be carefully removed, cleaned and delivered to the City of Portland's stock yard as directed.

The inlets and outlets of structures to be abandoned shall be plugged with bricks and mortar. The upper portions of the masonry shall be removed to a depth of three (3') feet below the finished grade, and the structures shall be completely filled with selected excavated material placed in six (6") inch layers and thoroughly compacted. Prior to backfilling, the sump shall be pumped and cleared of all water and foreign materials.

The existing masonry of structures to be removed shall be completely removed. The inlets and outlets shall be fully plugged with bricks and mortar. The cavity shall be completely filled with selected excavated materials placed in six (6") inch layers and thoroughly compacted.

604.041 REMOVE EXISTING DRAINAGE STRUCTURES AND REPLACE WITH NEW DRAINAGE STRUCTURES:

The existing castings on manholes and/or catch basins to be removed and replaced shall be carefully removed, cleaned and delivered to the City of Portland's stockyard as directed. All such castings shall become the property of the City. Existing inlet stones for catch basins to be replaced shall be carefully removed, cleaned and delivered to the City of Portland's stock yard as directed and shall be incidental to the cost of said item.

604.042 ALTERING, ADJUSTING AND RELOCATING CATCH BASINS AND MANHOLES:

Existing manholes to be altered shall be reconstructed as indicated on the plans or as required due to field conditions. Alterations include adjustments to manhole invert channel caused by new pipe connections, waterproofing, installation of new steps and adjusting frames and covers to grade and core drilling for new pipe connections and/or as specified on the plans.

Altering existing catch basins shall include the removal and replacement of inlet stone, frame, grate, Casco Trap, adjustment of frames and covers to grade, connection of underdrain to basin, and reconnection of exiting inlet/outlet and/or as specified on the plans.

Adjusting structure frame and covers to grade shall be paid for under item # 604.18 when that is the only adjustment to occur to an existing structure. Otherwise it is included as part of altering an existing structure. All manholes covers shall be set to binder pavement grade when final paving is specified to occur during the following construction season. NO STRUCTURE COVERS SHALL BE LEFT RAISED AFTER THE WINTER CONSTRUCTION MORATORIUM IS IN EFFECT.

Relocating existing catch basins shall include the removal and replacement of inlet stone, frame, grate, Casco Trap, adjustment to grade, connection of underdrain to basin, and installation of new inlet/outlet and/or as specified on the plans.

604.05 METHOD OF MEASUREMENT:

Under this Subsection the following sections shall be amended as follows:

a. Subsection (a) of the Standard Specifications shall be deleted and the following paragraph shall be included:

Complete structures. Each catch basin and manhole will be measured per each complete.

c. Subsections (c) and (d) of the Standard Specifications shall be deleted and the following paragraph shall be included:

All steps, castings or other appurtenances installed as shown on the plans or as required shall not be measured for payment.

d. Each existing drainage structure to be abandoned or removed will be one unit.

e. Each existing drainage structure to be removed and replaced with a new drainage structure will be considered as one unit.

Hydrobrake Vortex Flow Control Devices shall be measured by each, complete and in place as required.

604.06 BASIS OF PAYMENT:

The first paragraph shall be amended by adding the following sentence:

The cost of furnishing and installing steps, installing reinforced steel concrete stubs and other appurtenances shall be considered as incidental to the structure and no separate payment will be made therefore.

The following paragraphs shall be added:

August 26, 2003

The cost of furnishing and installing adjustment rings for catch basins and manholes, for the purpose of raising frames and covers to final pavement grade, shall be considered incidental to the cost for the respective pay item and no separate payment will be made for this work.

The cost of core drilling for new pipe connections shall be considered incidental to the cost for adjusting any manholes or catch basins or incidental to the cost of installing underdrain or storm drain pipe.

The cost of excavation and backfill of all catch basins or manholes, either new, abandoned, or removed and/or replaced shall be included in the cost of the specific work for each type of structure.

The cost of resetting curb inlet stones shall be considered incidental to the cost of adjusting catch basins to grade and no separate payments will be made. The cost of delivering inlet stones and/or castings to approved sites shall be considered as incidental to the contract items involved.

The cost of maintaining flows in existing sewer lines and manholes and any maintenance and cleaning of said sewers that may be required as a result of new manhole installations shall be incidental to the related pay item and no separate payment for this work will be made.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
604.072	Catch Basin Type A1C	Each
604.15	Manhole	Each
604.161	Alter Catch Basin	Each
604.18	Alter Manhole or Catch Basin To Grade	Each

SPECIAL PROVISION

SECTION 605  
UNDERDRAIN

The provisions of Section 605 of the Standard Specifications shall apply with the following additions and modifications:

605.01 DESCRIPTION:

The proposed underdrain shall be constructed as shown on the plans and specified herein. The type of pipe material used for this purpose shall be SDR-35, Smooth Lined HDPE or approved equal. Coiled pipes shall not be used.

605.02 MATERIALS:

Bedding material around underdrain shall conform to the requirements of Subsection 703.30 of these specifications. Material for pipe shall conform to the appropriate subsection of Section 700 of the Standard Specifications for the particular type of pipe supplied. Underdrain filter fabric material shall be equal to Mirafi 140 by Fiber Industries, Inc.

605.04 UNDERDRAIN CONSTRUCTION:

Underdrain shall be constructed in accordance with the Standard Specifications and as shown on the plans and detail sheets of the Contract Drawings.

605.06 METHOD OF MEASUREMENT:

Underdrain will be measured by the linear meter, complete in place.

605.07 BASIS OF PAYMENT:

The accepted quantity of underdrain will be paid for at the contract unit price per linear meter, complete in place.

Trench Excavation, Couplings, Connections of Pipe, Crushed Stone, Subbase Gravel, Underdrain Filter Fabric and all other appurtenances necessary to satisfactorily complete the work shall be considered as incidental to the cost of supplying and installing the underdrain.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
605.11	300mm (12") Underdrain Type C	Linear Meter
605.12	375mm (15") Underdrain Type C	Linear Meter
605.13	450mm (18") Underdrain Type C	Linear Meter

SPECIAL PROVISION

SECTION 607  
FENCES

Amendments to the Standard Specifications for

CONCRETE MASONRY UNIT WALL

Materials

Add the following:

Concrete Masonry Units (CMU) which match existing wall units.

General

Add the following:

The contractor shall disassemble the existing CMU wall and reassemble it in the location shown on the plans. The contractor is responsible for the protection of material during construction, replacement of any broken material and shall provide new material to complete the construction if additional material is required.

Construction Requirements

Add the following:

The contractor shall reconstruct the CMU wall according to the manufacturer's guidelines, and in reasonable close conformance with plans. This work shall include all incidentals necessary to complete the wall including: disassembly, excavation, footing, anchoring, backfill and clean-up.

Method of Measurement

Remove and reset CMU wall will be measured by the meter, along the top of accepted finished wall.

Basis of Payment

The accepted quantity of CMU wall will be paid for at the contract unit price per linear meter complete in place. Payment shall be full compensation for disassembly, stockpiling material, furnishing and re-assembling all materials, excavation, footing, anchoring, backfill, clean-up and all incidentals necessary to complete the work. Payment will be made under:

<u>Pay Item</u>		<u>Unit</u>
607.291	Remove and Reset Stone Wall	M

SPECIAL PROVISION  
  
SECTION 627  
PAVEMENT MARKINGS

Amendments to the Standard Specifications for  
  
REFLECTIVE LIQUID PAVEMENT MARKINGS

Materials

Add the following:

Reflective liquid pavement markings as manufactured by 3M under the name of *Stamark Liquid Pavement Markings, Series 1500*, or an approved equal.

Material specifications for this product, or an equal, shall be submitted for review and approval by the Department prior to final installation.

General

Add the following:

The City of Portland is testing the functionality and life expectancy of this product and requests its use on this project. This product is specified for use on crosswalks, stop bars, symbols and legends. Channelizing lines shall meet standard specifications or at the contractor's option these specifications.

Construction Requirements

Add the following:

Installation of this product shall be in accordance with the manufacture's guidelines and as directed by the Resident.

Basis of Payment

The accepted quantities of pavement markings will be paid for under the appropriate Section 627 Pay Items.

SPECIAL PROVISION  
SECTION 652  
MAINTENANCE OF TRAFFIC

Approaches. Approach signing shall include the following signs shown on the Standard Maintenance of Traffic in Construction Zones for "Project Approach Signing - Two Way Traffic".

- Road Work Ahead
- Road Work 1000 Feet
- Road Work 500 Feet with 25 MPH Advisory Speed Plate
- End Road Work

Work Areas. At each work site, signs and channelizing devices as shown on the Standard Maintenance of Traffic in Construction Zones shall be used as directed by the Resident.

Signs include:

- Work Zone
- Speed Limit Plate
- Fines Double
- Work Area Ahead with 25 MPH Advisory Speed Plate
- Work Area Ahead
- One Lane Road Ahead
- Flagger Sign
- Trucks Entering
- Be Prepared to Stop

Other typical signs include:

- Pavement Ends
- Sidewalk Closed
- Sidewalk Closed Use Other Side
- Pedestrians Pass at Own Risk
- Low Shoulder
- Directional Arrows
- Bump

The above lists of Approach signs and Work Area signs are representative of the contract requirements. Other sign legends may be required.

The Contractor shall provide a minimum roadway width of 7 m [22 feet] for two way traffic whenever possible and at all times when the Contractor is not working. Where one way traffic is approved by the Resident it shall be controlled through work areas by



flaggers and the minimum roadway width shall be 3.5 m [11 feet]. Flaggers equipped with radios, field telephones or other means of direct communication shall be used to control one way traffic during paving operations and at other times when directed by the Resident.

Aggregate subbase course shall be placed as soon as possible after excavation and acceptance of the subgrade, and the "torn up" area left overnight between the beginning of the excavation and the complete aggregate subbase course shall not exceed 15 m [50 feet].

Channelization. Channelization devices shall include the following:

- Type I Barricades
- Type II Barricades
- Vertical Panel Markers
- Drums
- Cones

Channelization devices shall be installed and maintained at the spacing determined by the MUTCD through the work area.

Paving. When paving operations or shoulder grading leave a 75 mm [3 inch] or less exposed vertical face at the edge of the traveled way, channelizing devices shall be placed two feet outside the edge of pavement at intervals not exceeding 200 m [600 feet] and a 1200 mm x 1200 mm [48 inch x 48 inch] W8-9 Low Shoulder sign shall be placed at a maximum spacing of 0.8 km [1/2 mile].

When paving operations leave more than a three inch exposed vertical face at the edge of a traveled way, the Contractor shall place shoulder material for a width of at least four feet to meet the pavement grade and place channelizing devices as above before the lane is opened to traffic.

Temporary Centerline. A temporary centerline of reflectorized traffic paint shall be marked each day on all new pavement to be used by traffic. The temporary centerline shall conform to the standard markings patterns used for permanent markings and will be paid for under Pay Item 627.76.

Failure to apply a temporary centerline daily will result in suspension of paving until temporary markings are applied to all previously placed pavement.

Roadside Recovery Area. The Contractor shall not store material nor park equipment within 3 m [10 feet] of the edge of the established travel lanes and equipment parked overnight within 7.5 m [25 feet] of the edge of a travel lane shall be clearly marked by channelizing devices or other reflective devices.

Portland  
7541(00)X  
August 28, 2003

Speed Limits in Work Zone. The Contractor shall sign all approved reduced speed limits on construction projects according to APM #431 - A Policy on the Establishment of Speed Limits in Work Zones.

**SPECIAL PROVISION**  
**SECTION 656**  
Temporary Soil Erosion and Water Pollution Control

The following is added to Section 656 regarding Project Specific Information and Requirements. All references to the Maine Department of Transportation Best Management Practices for Erosion and Sediment Control (a.k.a. Best Management Practices manual or BMP Manual) are a reference to the latest revision of said manual. The "Table of Contents" of the latest version is dated "1/19/00" (available at <http://www.state.me.us/mdot/mainhtml/bmp/bmpjan2000.pdf>.)

**Procedures specified shall be according to the BMP Manual unless stated otherwise.**

Any and all references to "bark mulch" or "composted bark mix" shall be a reference to "Erosion Control Mix" in accordance with *Standard Specification, Section 619 - Mulch*.

**Project Specific Information and Requirements**

The following information and requirements apply specifically to this Project. The temporary soil erosion and water pollution control measures associated with this work shall be addressed in the SEWPCP.

1). This project is in the Fall Brook watershed. Fall Brook is listed as a Class C water body by the Maine DEP but it does not attain Class C standards. Therefore, it is considered **SENSITIVE** for the purposes of this project. The Contractor's SEWPCP shall comply with Section II.B., Guidelines for Sensitive Waterbodies in the BMP Manual.

2). Newly disturbed earth shall be mulched by the end of each workday. Mulch shall be maintained on a daily basis.

3). The SEWPCP shall describe the location and method of temporary erosion and sediment control for existing and proposed catch basins and outlet areas.

4). If water is flowing within the drainage system, the water shall be diverted to a stable area or conduit and work shall be conducted in the dry. The Contractor's plan shall address when and where the diversions will be necessary.

5). Dust control items other than those under *Standard Specification, Section 637 – Dust Control*, if applicable, shall be included in the plan.

**SPECIAL PROVISION**  
**SECTION 656**  
Temporary Soil Erosion and Water Pollution Control

6). Permanent slope stabilization measures shall be applied within one week of the last soil disturbance. Permanent seeding shall be done in accordance with *Standard Specification, Section 618 – Seeding* unless the Contract states otherwise.

7). After November 1 the Contractor shall use winter stabilization methods, such as Erosion Control Mix as specified in *Standard Specification, Section 619 – Mulch*. If required, spring procedures for permanent stabilization shall also be described in the plan. Use of this product for over-winter temporary erosion control will be incidental to the contract and be paid for as part of Pay Item 656.75.

8). Repairs to temporary erosion control practices shall occur within 24 hours after storm-related failures.

SPECIAL PROVISION  
SECTION 718  
LED INDICATIONS

All new traffic signal (vehicular and/or pedestrian) heads shall have light emitting optical assemblies for all colors.

# Permits & Cultural Resources Unit

PIN #: 7541.00

Location: Portland

Permit Member: Ben Condon

Photographs ☐

Database/Projex ☒

Package to ENV Coordinator: 8/11/03

☒ **Section 106 and Tribal Consultation**

Architectural Resources

MOA ☐

Applicable ☒

Approved ☒

Archeological Resources

MOA ☐

Applicable ☒

Approved ☒

Tribal Consultation

N/A ☒

Applicable ☐

Approved ☐

☒ **4(f) and 6(f)**

Section 4(f)

N/A ☒

Applicable ☐

Approved ☐

LAWCON 6(f)

N/A ☒

Applicable ☐

Approved ☐

☒ **Maine Department of Environmental Protection (MDEP) Site Location of Development**

N/A ☐

Applicable ☐

Approved ☐

☒ **Local Zoning, Title 30-A, Section 4325-6.**

Is the project something other than the highway and bridge system, such as a maintenance lot, building/parking facility? Yes

☐ No ☒ If no, the project is exempt.

If yes, continue. Does the town in which the project is located have a comprehensive plan consistent with the Growth Management Program? Yes ☐ No ☐ If no, the project is exempt.

If yes, local zoning ordinances and/or permits are needed.

Approved ☐

☒ **Maine Department of Inland Fisheries and Wildlife (MDIFW) Essential Habitat**

Eagle Nest

N/A ☒

Applicable ☐

Approved ☐

Piping Plover

N/A ☒

Applicable ☐

Approved ☐

Roseate Tern

N/A ☒

Applicable ☐

Approved ☐

☒ **United States Fish and Wildlife Service (USFWS), Migratory Bird Act**

N/A ☒

Applicable ☐

☒ **Maine Department of Conservation/ Public Lands, Submerged Land Lease**

N/A ☒

Applicable ☐

☒ **Land Use Regulation Commission (LURC)** ☒ Not Applicable

No permit ☐

Notice ☐

Approved ☐

Permit ☐

Approved ☐

☒ **Maine Department of Environmental Protection (MDEP), Natural Resource Protection Act**

No permit required ☒

Exempt ☐

(Must use erosion and sediment control and not block fish passage.)

PBR ☐

Approved ☐

Tier 1 ☐

Approved ☐

Tier 2 ☐

Approved ☐

Tier 3 ☐

Approved ☐

☒ **Army Corps of Engineers (ACOE), Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act.**

No permit required ☒

Category 1-NR ☐

Approved ☐

Category 2 ☐

Approved ☐

Category 3 ☐

Approved ☐

☒ **IN-WATER TIMING RESTRICTIONS:** 105 Special Provision ☐ n/a ☒ No Instream Work

Dates instream work is allowed:

☒ **Special Provision 656, Erosion Control Plan**

Boxes marked in red indicate items that are attached and need to be placed in the contract by the Project Manager.

For Questions or Comments, Please Contact David Gardner @ 624-3105